**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3
AMENDED REPORT ☐

## APPLICATION FOR PERMIT TO DRILL

**1. WELL NAME and NUMBER**
16-16D-46 BTR

**2. TYPE OF WORK**
DRILL NEW WELL ● REENTER P&A WELL ○ DEEPEN WELL ○

**3. FIELD OR WILDCAT**
ALTAMONT

**4. TYPE OF WELL**
Oil Well Coalbed Methane Well: NO

**5. UNIT or COMMUNITIZATION AGREEMENT NAME**

**6. NAME OF OPERATOR**
BILL BARRETT CORP

**7. OPERATOR PHONE**
303 312-8164

**8. ADDRESS OF OPERATOR**
1099 18th Street Ste 2300, Denver, CO, 80202

**9. OPERATOR E-MAIL**
BHilgers@billbarrettcorp.com

**10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)**
2OG0005608

**11. MINERAL OWNERSHIP**
FEDERAL ○ INDIAN ● STATE ○ FEE ○

**12. SURFACE OWNERSHIP**
FEDERAL ○ INDIAN ● STATE ○ FEE ○

**13. NAME OF SURFACE OWNER (if box 12 = 'fee')**

**14. SURFACE OWNER PHONE (if box 12 = 'fee')**

**15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')**

**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**

**17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')**
Uintah and Ouray

**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS**
YES ○ (Submit Commingling Application) NO ●

**19. SLANT**
VERTICAL ○ DIRECTIONAL ● HORIZONTAL ○

| 20. LOCATION OF WELL | FOOTAGES | QTR-QTR | SECTION | TOWNSHIP | RANGE | MERIDIAN |
|---|---|---|---|---|---|---|
| LOCATION AT SURFACE | 1676 FSL 1303 FEL | NESE | 16 | 4.0 S | 6.0 W | U |
| Top of Uppermost Producing Zone | 1065 FSL 960 FEL | SESE | 16 | 4.0 S | 6.0 W | U |
| At Total Depth | 1061 FSL 953 FEL | SESE | 16 | 4.0 S | 6.0 W | U |

**21. COUNTY**
DUCHESNE

**22. DISTANCE TO NEAREST LEASE LINE (Feet)**
953

**23. NUMBER OF ACRES IN DRILLING UNIT**
640

**25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)**
3350

**26. PROPOSED DEPTH**
MD: 7704 TVD: 7620

**27. ELEVATION - GROUND LEVEL**
6565

**28. BOND NUMBER**
LPM8874725

**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE**
Duchesne City Culinary Water Dock

### Hole, Casing, and Cement Information

| String | Hole Size | Casing Size | Length | Weight | Grade & Thread | Max Mud Wt. | Cement | Sacks | Yield | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| Cond | 26 | 16 | 0 - 80 | 65.0 | Unknown | 8.8 | Unknown | 0 | 0.0 | 0.0 |
| Surf | 12.25 | 9.625 | 0 - 1300 | 36.0 | J-55 ST&C | 8.8 | Halliburton Light , Type Unknown | 150 | 3.16 | 11.0 |
| | | | | | | | Halliburton Premium , Type Unknown | 210 | 1.36 | 14.8 |
| Prod | 8.75 | 5.5 | 0 - 7704 | 17.0 | P-110 LT&C | 9.7 | Unknown | 630 | 2.31 | 11.0 |
| | | | | | | | Unknown | 840 | 1.42 | 13.5 |

## ATTACHMENTS

**VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

**NAME** Venessa Langmacher | **TITLE** Senior Permit Analyst | **PHONE** 303 312-8172

**SIGNATURE** | **DATE** 09/13/2011 | **EMAIL** vlangmacher@billbarrettcorp.com

**API NUMBER ASSIGNED**
43013509560000

**APPROVAL**

Permit Manager

**RECEIVED: September 20, 2011**

# DRILLING PLAN

BILL BARRETT CORPORATION

***16-16D-46 BTR Well Pad***
NE SE, 1676' FSL and 1303' FEL, Section 16, T4S-R6W, USB&M (surface hole)
SE SE, 1061' FSL and 953' FEL, Section 16, T4S-R6W, USB&M (bottom hole)
Duchesne County, Utah

**1 - 2. Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals**

| Formation | Depth – MD | Depth – TVD |
|---|---|---|
| Lower Green River* | 3,427' | 3,370' |
| Douglas Creek | 4,262' | 4,180' |
| Black Shale | 5,084' | 5,000' |
| Castle Peak | 5,299' | 5,215' |
| Uteland Butte | 5,594' | 5,510' |
| Wasatch* | 5,809' | 5,725' |
| TD | 7,704' | 7,620' |

*PROSPECTIVE PAY

The Wasatch and the Lower Green River are primary objectives for oil/gas.

Base of Useable Water = 4,500'

**3. BOP and Pressure Containment Data**

| Depth Intervals | BOP Equipment |
|---|---|
| 0 – 1,300' | No pressure control required |
| 1,300' – TD | 11" 5000# Ram Type BOP<br>11" 5000# Annular BOP |
| - Drilling spool to accommodate choke and kill lines; | |
| - Ancillary equipment and choke manifold rated at 5,000 psi. All BOP and BOPE tests will be in accordance with the requirements of onshore Order No. 2; | |
| - The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all BOP pressure tests. | |
| - BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up To operate most efficiently in this manner. | |

**4. Casing Program**

| Hole Size | SETTING DEPTH (FROM) | (TO) | Casing Size | Casing Weight | Casing Grade | Thread | Condition |
|---|---|---|---|---|---|---|---|
| 26" | Surface | 80' | 16" | 65# | | | |
| 12 1/4" | Surface | 1,300' | 9 5/8" | 36# | J or K 55 | BT&C | New |
| 8 ¾" | Surface | TD | 5 ½" | 17# | P-110 | LT&C | New |
| **NOTE: In addition, 8 ¾" hole size may change to 7 7/8" at the point the bit is changed out.** | | | | | | | |

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Bill Barrett Corporation
Drilling Program
#16-16D-46 BTR
Duchesne County, Utah

## 5. Cementing Program

| Casing | *Cementing* |
|---|---|
| 16" Conductor Casing | *Grout* |
| 9 5/8" Surface Casing | *Lead* with approximately 150 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 $ft^3$/sx) circulated to surface with 75% excess. Top of lead estimated at surface.<br><br>*Tail* with approximately 210 sx Halliburton Premium cement with additives mixed at 14.8 ppg (yield = 1.36 $ft^3$/sx), calculated hole volume with 75% excess. Top of tail estimated at 800'. |
| 5 ½" Production Casing | *Lead* with approximately 630 sx Tuned Light cement with additives, mixed at 11.0 ppg (yield = 2.31 $ft^3$/sx,) . Top of lead estimated at 800'.<br><br>*Tail* with approximately 840 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 $ft^3$/sx). Top of tail estimated at 4,584'. |

## 6. Mud Program

| Interval | Weight | Viscosity | Fluid Loss (API filtrate) | Remarks |
|---|---|---|---|---|
| 0' – 80' | 8.3 – 8.8 | 26 – 36 | NC | Freshwater Spud Mud Fluid System |
| 80' – 1,300' | 8.3 – 8.8 | 26 – 36 | NC | Freshwater Spud Mud Fluid System |
| 1,300' – TD | 8.6 – 9.7 | 42-52 | 20 cc or less | DAP Polymer Fluid System |
| Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag. | | | | |

## 7. Testing, Logging and Core Programs

| | |
|---|---|
| Cores | None anticipated |
| Testing | None anticipated; drill stem tests may be run on shows of interest; |
| Sampling | 30' to 50' samples; surface casing to TD. Preserve samples all show intervals; |
| Surveys | MWD as needed to land wellbore; |
| Logging | DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface). FMI & Sonic Scanner to be run at geologist's discretion. |

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Drilling Program
#16-16D-46 BTR
Duchesne County, Utah

**8. Anticipated Abnormal Pressures or Temperatures**

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 3844 psi* and maximum anticipated surface pressure equals approximately 2167 psi** (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

*Max Mud Wt x 0.052 x TD = A (bottom hole pressure)
**Maximum surface pressure = A – (0.22 x TD)

**9. Auxiliary Equipment**

a) Upper kelly cock; lower Kelly cock will be installed while drilling
b) Inside BOP or stab-in valve (available on rig floor)
c) Safety valve(s) and subs to fit all string connections in use
d) Mud monitoring will be visually observed

**10. Location and Type of Water Supply**

Water for the drilling and completion will be trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W.

**11. Drilling Schedule**

| | |
|---|---|
| Location Construction: | June 2012 |
| Spud: | June 2012 |
| Duration: | 15 days drilling time |
| | 45 days completion time |

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**PRESSURE CONTROL EQUIPMENT** – Schematic Attached

**A. Type: Eleven (11) Inch Double Gate Hydraulic BOP with Eleven (11) Inch Annular Preventer.** The blow out preventer will be equipped as follows:

1. One (1) blind ram (above).
2. One (1) pipe ram (below).
3. Drilling spool with two (2) side outlets (choke side 3-inch minimum, kill side 2-inch minimum).
4. 3-inch diameter choke line.
5. Two (2) choke line valves (3-inch minimum).
6. Kill line (2-inch minimum).
7. Two (2) chokes with one (1) remotely controlled from the rig floor.
8. Two (2) kill line valves, and a check valve (2-inch minimum).
9. Upper and lower kelly cock valves with handles available.
10. Safety valve(s) & subs to fit all drill string connections in use.
11. Inside BOP or float sub available.
12. Pressure gauge on choke manifold.
13. Fill-up line above the uppermost preventer.

**B. Pressure Rating:** 5,000 psi

**C. Testing Procedure:**

*Annular Preventer*

At a minimum, the Annular Preventer will be pressure tested to 50% of the rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition, the Annular Preventer will be functionally operated at least weekly.

*Blow-Out Preventer*

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yieldstrength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be

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maintained for a period of at least ten (10) minutes or until the requirmentsof the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

**D. Choke Manifold Equipment:**

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

**E. Accumulator:**

The accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir will be maintained at the manufacturer's recommendations.

The BOP system will have two (2) independent power sources to close the preventers. Nitrogen bottles (3 minimum) will be one (1) of these independent power sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six (6) months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in the *Onshore Oil & Gas Order Number 2.*

A manual locking device (i.e. hand wheels) or automatic locking device will be installed on all systems of 2M or greater. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

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Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems will be capable of closing all preventers. Remote controls for 5M or greater systems will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

**F. Miscellaneous Information:**

The Blow-Out Preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2.* The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.

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# Bill Barrett Corporation

## LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

**Well Name:** 16-16D-46 BTR

### Surface Hole Data:

| | |
|---|---|
| Total Depth: | 1,300' |
| Top of Cement: | 0' |
| OD of Hole: | 12.250" |
| OD of Casing: | 9.625" |

### Calculated Data:

| | | |
|---|---|---|
| Lead Volume: | **438.5** | $ft^3$ |
| Lead Fill: | **800'** | |
| Tail Volume: | **274.0** | $ft^3$ |
| Tail Fill: | **500'** | |

### Cement Data:

| | | |
|---|---|---|
| Lead Yield: | 3.16 | $ft^3/sk$ |
| % Excess: | 75% | |
| Top of Lead: | 0' | |

| | | |
|---|---|---|
| Tail Yield: | 1.36 | $ft^3/sk$ |
| % Excess: | 75% | |
| Top of Tail: | 800' | |

### Calculated # of Sacks:

| | |
|---|---|
| # SK's Lead: | **150** |
| # SK's Tail: | **210** |

### Production Hole Data:

| | |
|---|---|
| Total Depth: | 7,704' |
| Top of Cement: | 800' |
| Top of Tail: | 4,584' |
| OD of Hole: | 8.750" |
| OD of Casing: | 5.500" |

### Calculated Data:

| | | |
|---|---|---|
| Lead Volume: | **1433.7** | $ft^3$ |
| Lead Fill: | **3,784'** | |
| Tail Volume: | **1182.3** | $ft^3$ |
| Tail Fill: | **3,120'** | |

### Cement Data:

| | | |
|---|---|---|
| Lead Yield: | 2.31 | $ft^3/sk$ |
| Tail Yield: | 1.42 | $ft^3/sk$ |
| % Excess: | 50% | |

### Calculated # of Sacks:

| | |
|---|---|
| # SK's Lead: | **630** |
| # SK's Tail: | **840** |

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# 16-16D-46 BTR Proposed Cementing Program

| **Job Recommendation** | | | **Surface Casing** |
|---|---|---|---|
| **Lead Cement - (800' - 0')** | | | |
| Halliburton Light Premium | Fluid Weight: | 11.0 | lbm/gal |
| 5.0 lbm/sk Silicalite Compacted | Slurry Yield: | 3.16 | $ft^3$/sk |
| 0.25 lbm/sk Kwik Seal | Total Mixing Fluid: | 19.48 | Gal/sk |
| 0.125 lbm/sk Poly-E-Flake | Top of Fluid: | 0' | |
| 2.0% Bentonite | Calculated Fill: | 800' | |
| | Volume: | 78.09 | bbl |
| | **Proposed Sacks:** | **150** | **sks** |
| **Tail Cement - (TD - 800')** | | | |
| Premium Cement | Fluid Weight: | 14.8 | lbm/gal |
| 2.0% Calcium Chloride | Slurry Yield: | 1.36 | $ft^3$/sk |
| | Total Mixing Fluid: | 6.37 | Gal/sk |
| | Top of Fluid: | 800' | |
| | Calculated Fill: | 500' | |
| | Volume: | 48.80 | bbl |
| | **Proposed Sacks:** | **210** | **sks** |

| **Job Recommendation** | | | **Production Casing** |
|---|---|---|---|
| **Lead Cement - (4584' - 800')** | | | |
| Tuned Light™ System | Fluid Weight: | 11.0 | lbm/gal |
| | Slurry Yield: | 2.31 | $ft^3$/sk |
| | Total Mixing Fluid: | 10.65 | Gal/sk |
| | Top of Fluid: | 800' | |
| | Calculated Fill: | 3,784' | |
| | Volume: | 255.34 | bbl |
| | **Proposed Sacks:** | **630** | **sks** |
| **Tail Cement - (7704' - 4584')** | | | |
| Econocem™ System | Fluid Weight: | 13.5 | lbm/gal |
| 0.125 lbm/sk Poly-E-Flake | Slurry Yield: | 1.42 | $ft^3$/sk |
| 1.0 lbm/sk Granulite TR 1/4 | Total Mixing Fluid: | 6.61 | Gal/sk |
| | Top of Fluid: | 4,584' | |
| | Calculated Fill: | 3,120' | |
| | Volume: | 210.55 | bbl |
| | **Proposed Sacks:** | **840** | **sks** |

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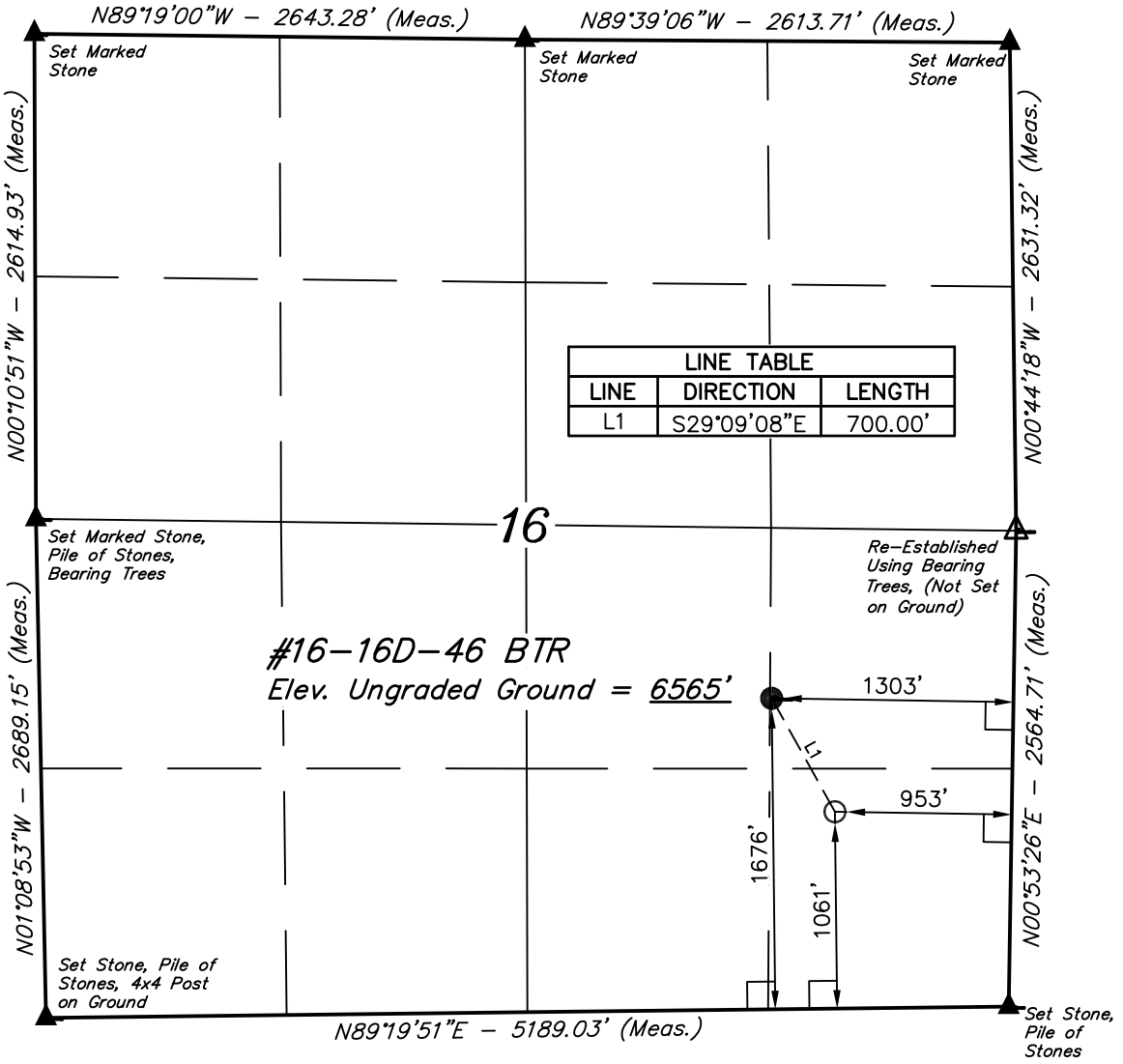
# T4S, R6W, U.S.B.&M.




| LINE TABLE | | |
|---|---|---|
| LINE | DIRECTION | LENGTH |
| L1 | S29°09'08"E | 700.00' |

## BILL BARRETT CORPORATION

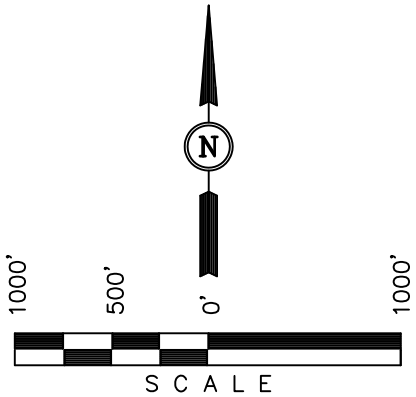
Well location, #16–16D–46 BTR, located as shown in the NE 1/4 SE 1/4 of Section 16, T4S, R6W, U.S.B.&M., Duchesne County, Utah.

## BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6097 FEET.

## BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.




### CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

05-26-11

**LEGEND:**

- ∟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

| NAD 83 (TARGET BOTTOM HOLE) | NAD 83 (SURFACE LOCATION) |
|---|---|
| LATITUDE = 40°07'43.66" (40.128794) | LATITUDE = 40°07'49.69" (40.130469) |
| LONGITUDE = 110°33'42.87" (110.561908) | LONGITUDE = 110°33'47.27" (110.563131) |
| **NAD 27 (TARGET BOTTOM HOLE)** | **NAD 27 (SURFACE LOCATION)** |
| LATITUDE = 40°07'43.81" (40.128836) | LATITUDE = 40°07'49.85" (40.130514) |
| LONGITUDE = 110°33'40.30" (110.561194) | LONGITUDE = 110°33'44.71" (110.562419) |


**UINTAH ENGINEERING & LAND SURVEYING**
**85 SOUTH 200 EAST – VERNAL, UTAH 84078**
(435) 789–1017


| SCALE | DATE SURVEYED: | DATE DRAWN: |
|---|---|---|
| 1" = 1000' | 02–08–11 | 03–02–11 |
| PARTY: C.R. A.W. S.B. | REFERENCES: G.L.O. PLAT | |
| WEATHER: COLD | FILE: BILL BARRETT CORPORATION | |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API Well Number: 43013509560000

# BILL BARRETT CORPORATION
# #16-16D-46 BTR
# SECTION 16, T4S, R6W, U.S.B.&M.

PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION FROM DUCHESNE, UTAH ALONG U.S. HIGHWAY 191 APPROXIMATELY 3.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE WEST; TURN RIGHT AND PROCEED IN A WESTERLY DIRECTION APPROXIMATELY 2.5 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN RIGHT AND PROCEED IN A NORTHWESTERLY, THEN WESTERLY DIRECTION APPROXIMATELY 4.1 MILES TO THE BEGINNING OF THE PROPOSED ACCESS FOR THE #8-16D-46 BTR TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 2,517' TO THE BEGINNING OF THE PROPOSED ACCESS TO THE SOUTHWEST; FOLLOW ROAD FLAGS IN A SOUTHWESTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 3,050' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM DUCHESNE, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 11.2 MILES.

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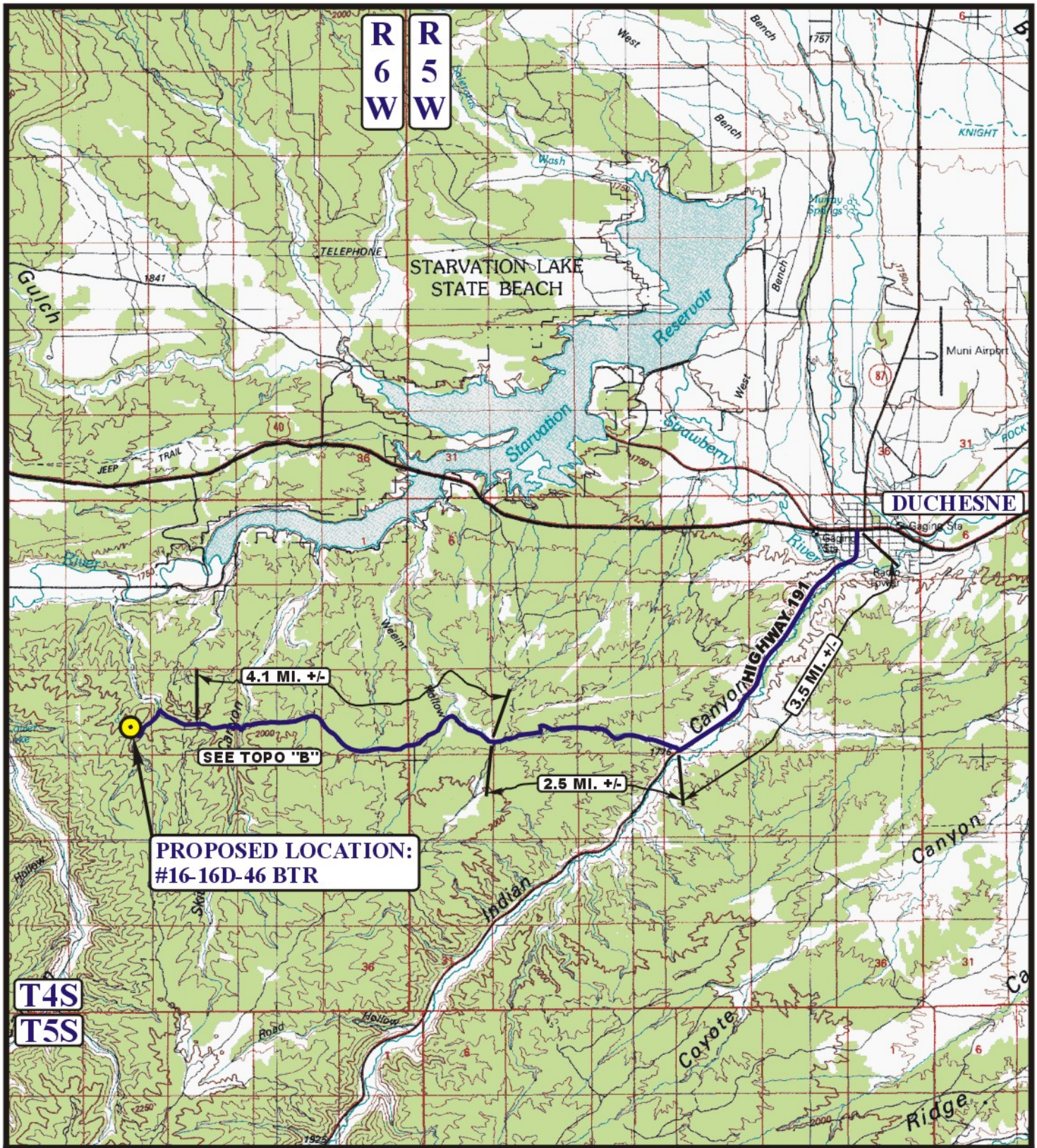



**LEGEND:**

PROPOSED LOCATION

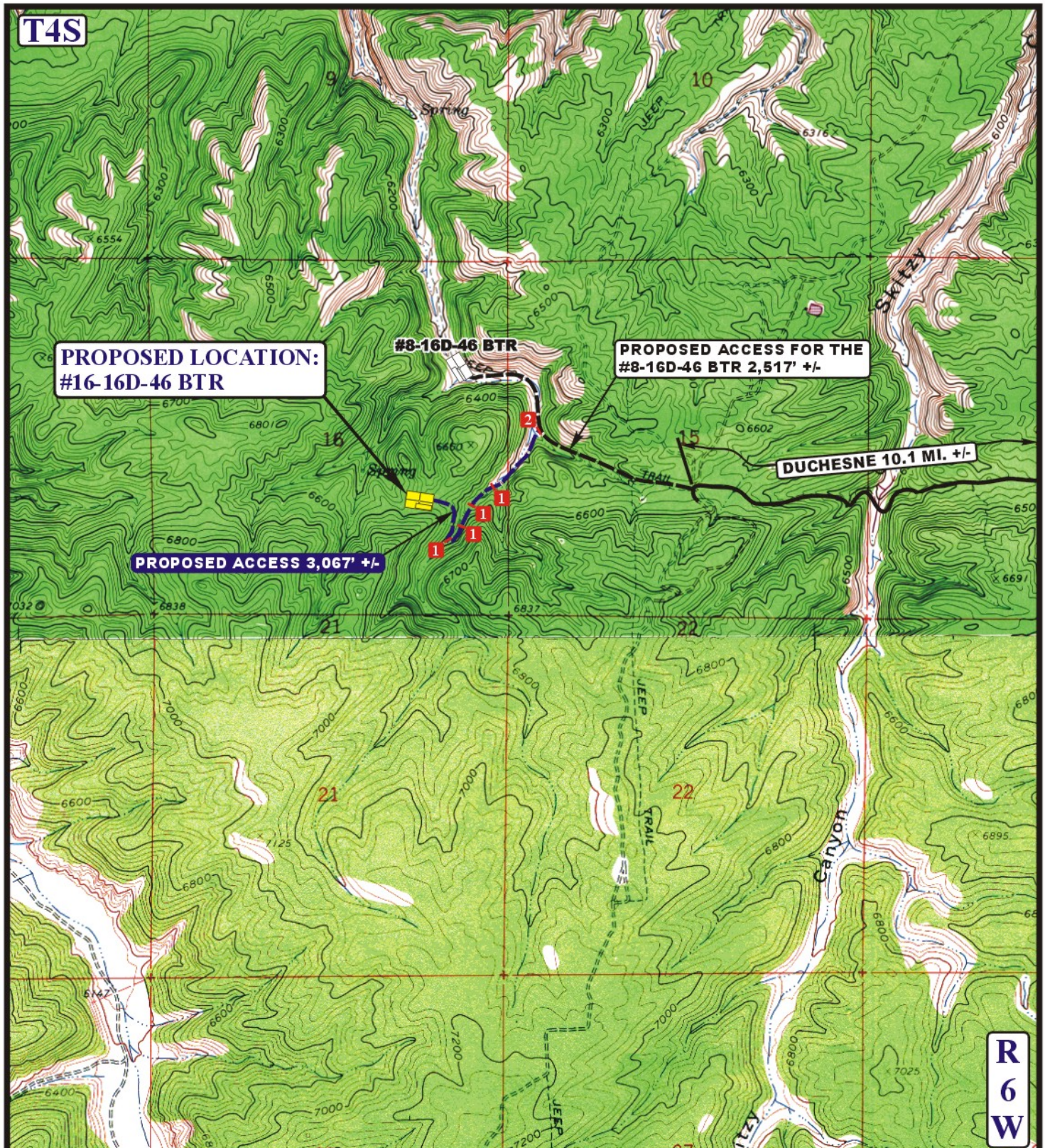
N

**BILL BARRETT CORPORATION**

**#16-16D-46 BTR**
**SECTION 16, T4S, R6W, U.S.B.&M.**
**1676' FSL 1303' FEL**

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

| ACCESS ROAD MAP | 02 MONTH | 10 DAY | 11 YEAR | A TOPO |
|---|---|---|---|---|
| SCALE: 1:100,000 | DRAWN BY: J.J. | REVISED: 05-24-11 | | |




## LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

1 24" CMP REQUIRED

2 48" CMP REQUIRED

N

## BILL BARRETT CORPORATION

#16-16D-46 BTR
SECTION 16, T4S, R6W, U.S.B.&M.
1676' FSL 1303' FEL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

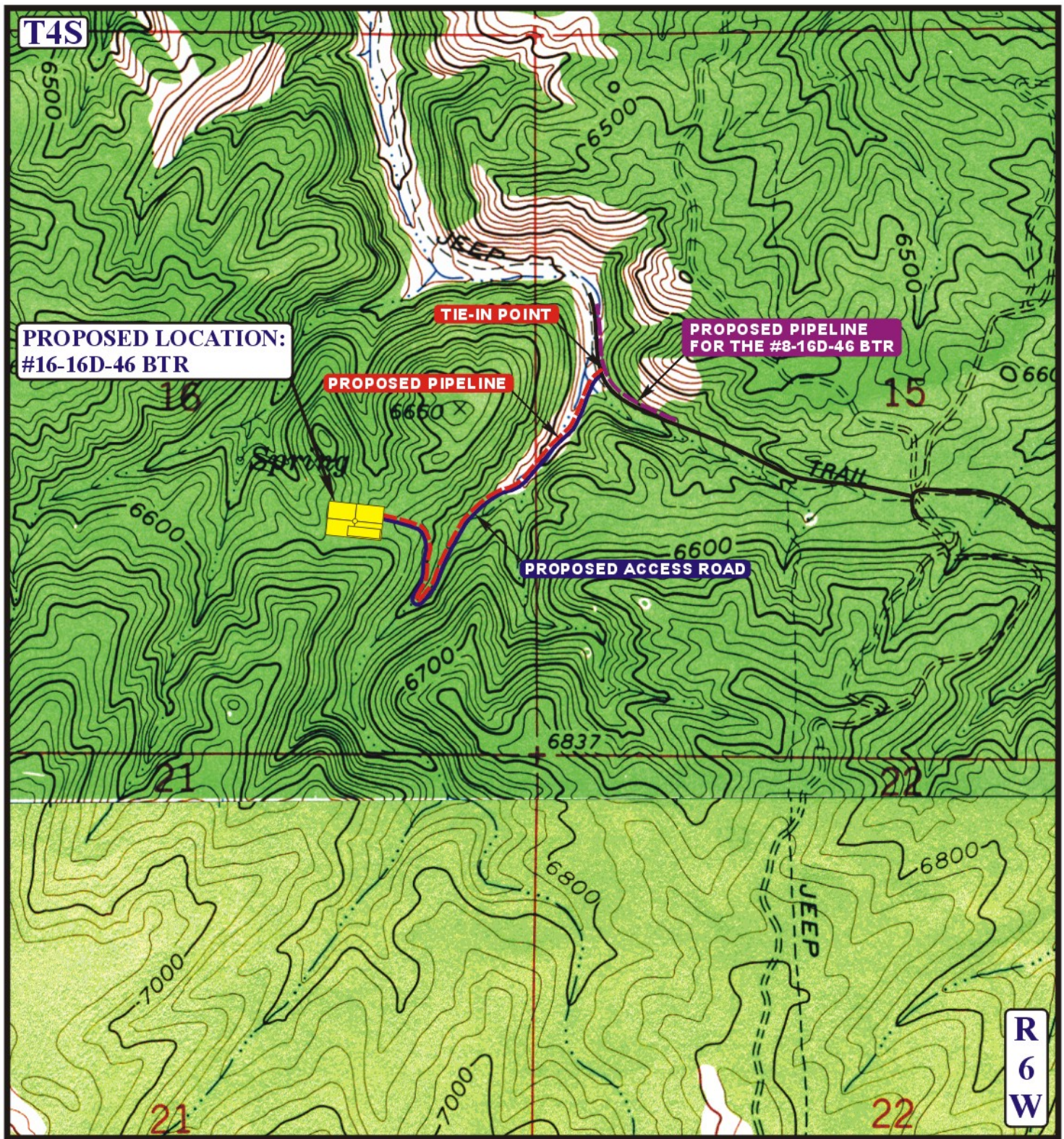
ACCESS ROAD MAP

02 MONTH | 10 DAY | 11 YEAR

SCALE: 1" = 2000' | DRAWN BY: J.J. | REV: 08-29-11 C.I.

B TOPO

API Well Number: 43013509560000




APPROXIMATE TOTAL PIPELINE DISTANCE = 3,071' +/-

**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)

N

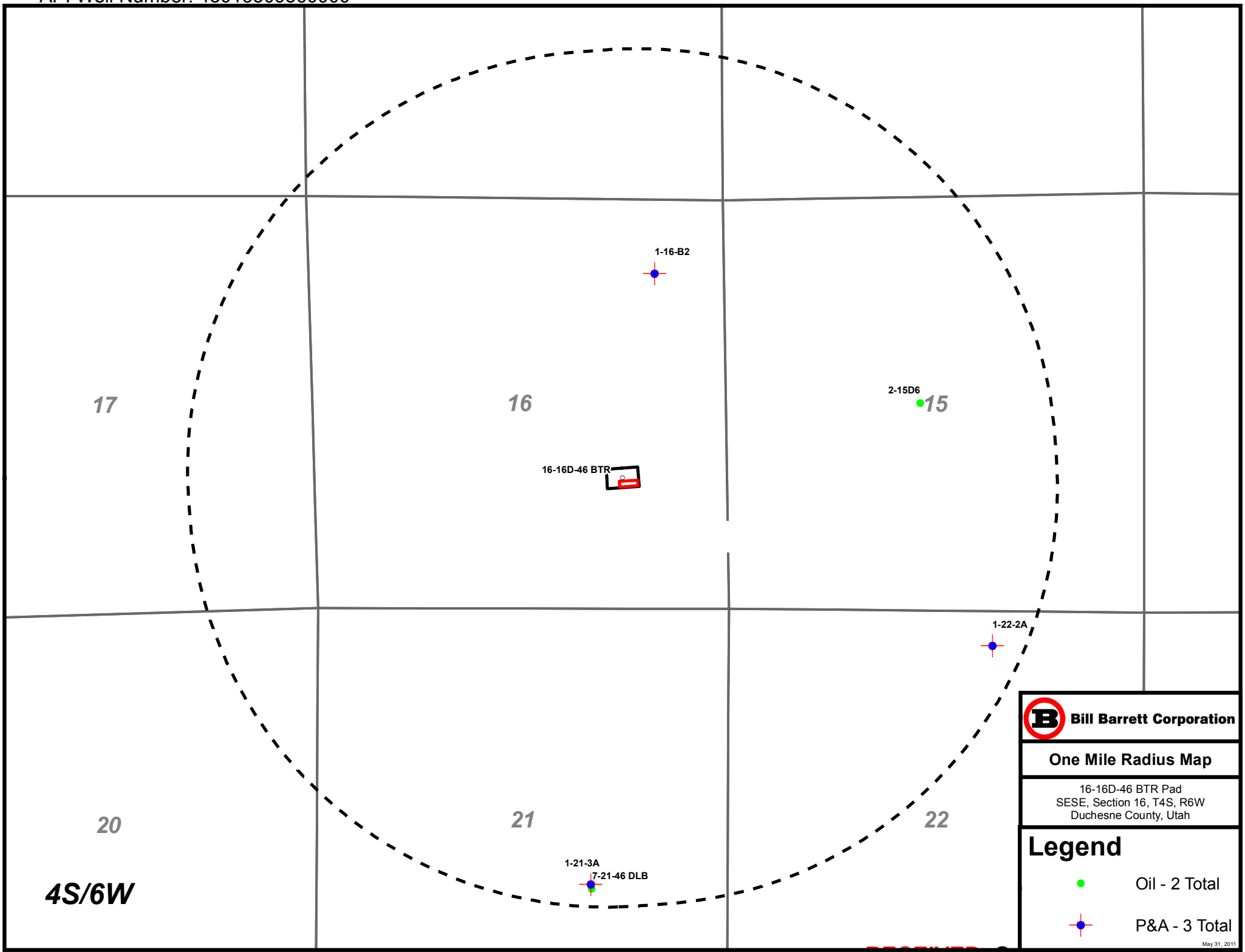
**BILL BARRETT CORPORATION**

**#16-16D-46 BTR**
**SECTION 16, T4S, R6W, U.S.B.&M.**
**1676' FSL 1303' FEL**


Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813


| TOPOGRAPHIC MAP | 02 MONTH | 10 DAY | 11 YEAR | C TOPO |
|---|---|---|---|---|
| SCALE: 1" = 1000' | DRAWN BY: J.J. | REV: 08-29-11 C.I. | | |

API Well Number: 43013509560000



API Well Number: 43013509560000

Bill Barrett Corporation

## COMPANY DETAILS: BILL BARRETT CORP

Calculation Method: Minimum Curvature
Error System: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

## SITE DETAILS: 16-16D-46 BTR

Blacktail Ridge

Site Centre Latitude: 40° 7' 49.850 N
Longitude: 110° 33' 44.708 E

Positional Uncertainity: 0.0
Convergence: 0.00
Local North: True

## WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|---|---|---|---|---|---|---|
| 16-16D 3PT MKR | 4560.0 | -611.2 | 342.5 | 40° 7' 43.810 N | 110° 33' 40.298 W | Rectangle (Sides: L200.0 W200.0) |
| 16-16D PBHL | 7620.0 | -611.2 | 342.5 | 40° 7' 43.810 N | 110° 33' 40.298 W | Rectangle (Sides: L200.0 W200.0) |

## SECTION DETAILS

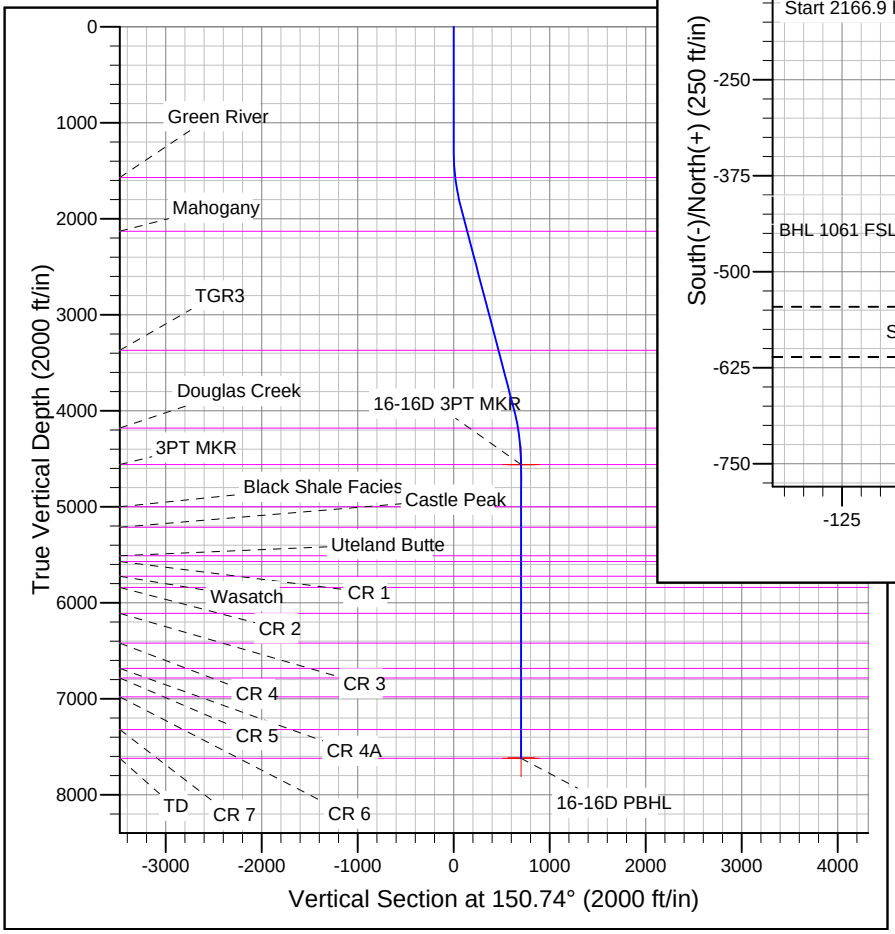
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1300.0 | 0.00 | 0.00 | 1300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1888.5 | 14.71 | 150.74 | 1882.1 | -65.6 | 36.7 | 2.50 | 150.74 | 75.1 | |
| 4 | 4055.4 | 14.71 | 150.74 | 3977.9 | -545.7 | 305.8 | 0.00 | 0.00 | 625.5 | |
| 5 | 4643.9 | 0.00 | 0.00 | 4560.0 | -611.2 | 342.5 | 2.50 | 180.00 | 700.6 | 16-16D 3PT MKR |
| 6 | 7703.9 | 0.00 | 0.00 | 7620.0 | -611.2 | 342.5 | 0.00 | 0.00 | 700.6 | 16-16D PBHL |

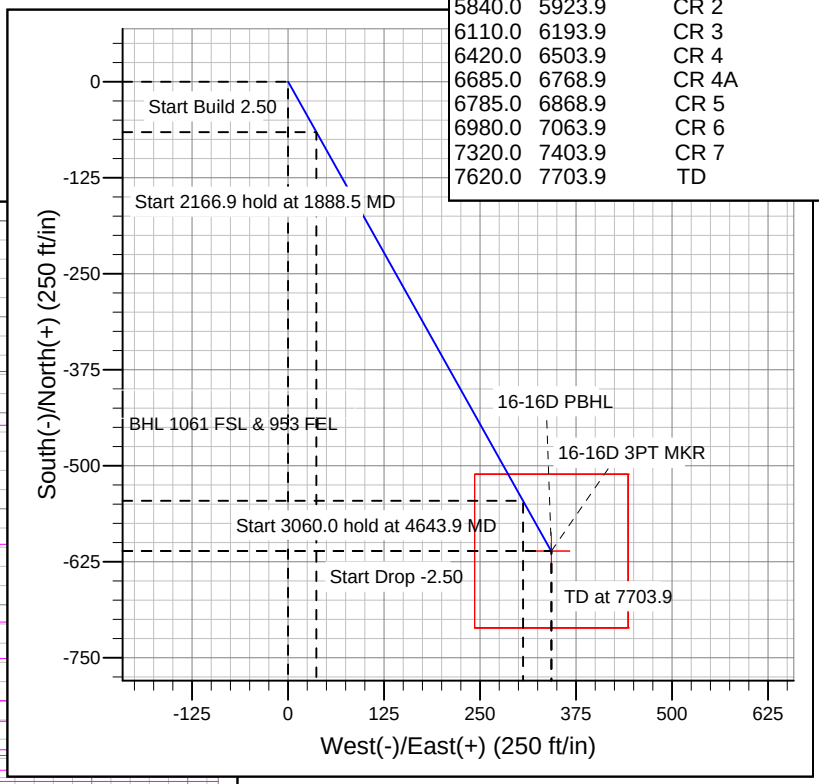
## FORMATION TOP DETAILS

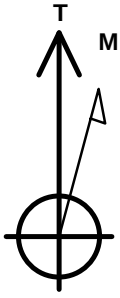
| TVDPath | MDPath | Formation |
|---|---|---|
| 1570.0 | 1570.6 | Green River |
| 2130.0 | 2144.9 | Mahogany |
| 3370.0 | 3426.9 | TGR3 |
| 4180.0 | 4262.2 | Douglas Creek |
| 4560.0 | 4643.9 | 3PT MKR |
| 5000.0 | 5083.9 | Black Shale Facies |
| 5215.0 | 5298.9 | Castle Peak |
| 5510.0 | 5593.9 | Uteland Butte |
| 5570.0 | 5653.9 | CR 1 |
| 5725.0 | 5808.9 | Wasatch |
| 5840.0 | 5923.9 | CR 2 |
| 6110.0 | 6193.9 | CR 3 |
| 6420.0 | 6503.9 | CR 4 |
| 6685.0 | 6768.9 | CR 4A |
| 6785.0 | 6868.9 | CR 5 |
| 6980.0 | 7063.9 | CR 6 |
| 7320.0 | 7403.9 | CR 7 |
| 7620.0 | 7703.9 | TD |

## CASING DETAILS

No casing data is available




Azimuths to True North
Magnetic North: 11.70°

Magnetic Field
Strength: 52411.2snT
Dip Angle: 65.81°
Date: 12/31/2009
Model: IGRF200510

**RECEIVED: September 13, 2011**

# Bill Barrett Corp

## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | Compass | **Local Co-ordinate Reference:** | Well 16-16D-46 BTR |
| **Company:** | BILL BARRETT CORP | **TVD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Project:** | DUCHESNE COUNTY, UT (NAD 27) | **MD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Site:** | 16-16D-46 BTR | **North Reference:** | True |
| **Well:** | 16-16D-46 BTR | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | 16-16D-46 BTR | | |
| **Design:** | Design #1 | | |

**Project** DUCHESNE COUNTY, UT (NAD 27)

| | | | |
|---|---|---|---|
| **Map System:** | US State Plane 1927 (Exact solution) | **System Datum:** | Ground Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | Utah Central 4302 | | |

**Site** 16-16D-46 BTR

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 45,438,469.46 ft | **Latitude:** | 40° 7' 49.850 N |
| **From:** | Lat/Long | **Easting:** | 17,311,806.61 ft | **Longitude:** | 110° 33' 44.708 E |
| **Position Uncertainty:** | 0.0 ft | **Slot Radius:** | " | **Grid Convergence:** | 0.00 ° |

**Well** 16-16D-46 BTR, 1676 FSL & 1303 FEL

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | -44,622,386.6 ft | **Northing:** | 655,958.97 ft | **Latitude:** | 40° 7' 49.850 N |
| | **+E/-W** | -15,518,274.3 ft | **Easting:** | 2,262,153.83 ft | **Longitude:** | 110° 33' 44.708 W |
| **Position Uncertainty** | | 0.0 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 6,565.0 ft |

**Wellbore** 16-16D-46 BTR

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF200510 | 12/31/2009 | 11.70 | 65.81 | 52,411 |

**Design** Design #1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.0 |

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|---|---|---|---|---|
| | 0.0 | 0.0 | 0.0 | 150.74 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,888.5 | 14.71 | 150.74 | 1,882.1 | -65.6 | 36.7 | 2.50 | 2.50 | 0.00 | 150.74 | |
| 4,055.4 | 14.71 | 150.74 | 3,977.9 | -545.7 | 305.8 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,643.9 | 0.00 | 0.00 | 4,560.0 | -611.2 | 342.5 | 2.50 | -2.50 | 0.00 | 180.00 | 16-16D 3PT MKR |
| 7,703.9 | 0.00 | 0.00 | 7,620.0 | -611.2 | 342.5 | 0.00 | 0.00 | 0.00 | 0.00 | 16-16D PBHL |

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## Planning Report

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|---|---|---|---|
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| **Project:** | DUCHESNE COUNTY, UT (NAD 27) | **MD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Site:** | 16-16D-46 BTR | **North Reference:** | True |
| **Well:** | 16-16D-46 BTR | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | 16-16D-46 BTR | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 2.50 | 150.74 | 1,400.0 | -1.9 | 1.1 | 2.2 | 2.50 | 2.50 | 0.00 |
| 1,500.0 | 5.00 | 150.74 | 1,499.7 | -7.6 | 4.3 | 8.7 | 2.50 | 2.50 | 0.00 |
| 1,570.6 | 6.77 | 150.74 | 1,570.0 | -13.9 | 7.8 | 16.0 | 2.50 | 2.50 | 0.00 |
| **Green River** | | | | | | | | | |
| 1,600.0 | 7.50 | 150.74 | 1,599.1 | -17.1 | 9.6 | 19.6 | 2.50 | 2.50 | 0.00 |
| 1,700.0 | 10.00 | 150.74 | 1,698.0 | -30.4 | 17.0 | 34.8 | 2.50 | 2.50 | 0.00 |
| 1,800.0 | 12.50 | 150.74 | 1,796.0 | -47.4 | 26.6 | 54.3 | 2.50 | 2.50 | 0.00 |
| 1,888.5 | 14.71 | 150.74 | 1,882.1 | -65.6 | 36.7 | 75.1 | 2.50 | 2.50 | 0.00 |
| 1,900.0 | 14.71 | 150.74 | 1,893.2 | -68.1 | 38.2 | 78.1 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 14.71 | 150.74 | 1,989.9 | -90.3 | 50.6 | 103.5 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 14.71 | 150.74 | 2,086.6 | -112.4 | 63.0 | 128.9 | 0.00 | 0.00 | 0.00 |
| 2,144.9 | 14.71 | 150.74 | 2,130.0 | -122.3 | 68.6 | 140.2 | 0.00 | 0.00 | 0.00 |
| **Mahogany** | | | | | | | | | |
| 2,200.0 | 14.71 | 150.74 | 2,183.3 | -134.6 | 75.4 | 154.3 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 14.71 | 150.74 | 2,280.1 | -156.7 | 87.8 | 179.7 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 14.71 | 150.74 | 2,376.8 | -178.9 | 100.2 | 205.1 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 14.71 | 150.74 | 2,473.5 | -201.0 | 112.7 | 230.4 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 14.71 | 150.74 | 2,570.2 | -223.2 | 125.1 | 255.8 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 14.71 | 150.74 | 2,666.9 | -245.3 | 137.5 | 281.2 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 14.71 | 150.74 | 2,763.7 | -267.5 | 149.9 | 306.6 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 14.71 | 150.74 | 2,860.4 | -289.7 | 162.3 | 332.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 14.71 | 150.74 | 2,957.1 | -311.8 | 174.7 | 357.4 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 14.71 | 150.74 | 3,053.8 | -334.0 | 187.1 | 382.8 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 14.71 | 150.74 | 3,150.6 | -356.1 | 199.6 | 408.2 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 14.71 | 150.74 | 3,247.3 | -378.3 | 212.0 | 433.6 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 14.71 | 150.74 | 3,344.0 | -400.4 | 224.4 | 459.0 | 0.00 | 0.00 | 0.00 |
| 3,426.9 | 14.71 | 150.74 | 3,370.0 | -406.4 | 227.7 | 465.9 | 0.00 | 0.00 | 0.00 |
| **TGR3** | | | | | | | | | |
| 3,500.0 | 14.71 | 150.74 | 3,440.7 | -422.6 | 236.8 | 484.4 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 14.71 | 150.74 | 3,537.4 | -444.7 | 249.2 | 509.8 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 14.71 | 150.74 | 3,634.2 | -466.9 | 261.6 | 535.2 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 14.71 | 150.74 | 3,730.9 | -489.1 | 274.1 | 560.6 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 14.71 | 150.74 | 3,827.6 | -511.2 | 286.5 | 586.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 14.71 | 150.74 | 3,924.3 | -533.4 | 298.9 | 611.4 | 0.00 | 0.00 | 0.00 |
| 4,055.4 | 14.71 | 150.74 | 3,977.9 | -545.7 | 305.8 | 625.5 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 13.60 | 150.74 | 4,021.1 | -555.2 | 311.1 | 636.4 | 2.50 | -2.50 | 0.00 |
| 4,200.0 | 11.10 | 150.74 | 4,118.8 | -573.8 | 321.5 | 657.8 | 2.50 | -2.50 | 0.00 |
| 4,262.2 | 9.54 | 150.74 | 4,180.0 | -583.5 | 327.0 | 668.9 | 2.50 | -2.50 | 0.00 |
| **Douglas Creek** | | | | | | | | | |
| 4,300.0 | 8.60 | 150.74 | 4,217.3 | -588.7 | 329.9 | 674.9 | 2.50 | -2.50 | 0.00 |

# Bill Barrett Corp

## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | Compass | **Local Co-ordinate Reference:** | Well 16-16D-46 BTR |
| **Company:** | BILL BARRETT CORP | **TVD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Project:** | DUCHESNE COUNTY, UT (NAD 27) | **MD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Site:** | 16-16D-46 BTR | **North Reference:** | True |
| **Well:** | 16-16D-46 BTR | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | 16-16D-46 BTR | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,400.0 | 6.10 | 150.74 | 4,316.5 | -599.9 | 336.2 | 687.7 | 2.50 | -2.50 | 0.00 |
| 4,500.0 | 3.60 | 150.74 | 4,416.2 | -607.3 | 340.3 | 696.1 | 2.50 | -2.50 | 0.00 |
| 4,600.0 | 1.10 | 150.74 | 4,516.1 | -610.8 | 342.3 | 700.2 | 2.50 | -2.50 | 0.00 |
| 4,643.9 | 0.00 | 0.00 | 4,560.0 | -611.2 | 342.5 | 700.6 | 2.50 | -2.50 | -343.03 |
| **3PT MKR - 16-16D 3PT MKR** | | | | | | | | | |
| 4,700.0 | 0.00 | 0.00 | 4,616.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,716.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,816.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 0.00 | 0.00 | 4,916.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,083.9 | 0.00 | 0.00 | 5,000.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **Black Shale Facies** | | | | | | | | | |
| 5,100.0 | 0.00 | 0.00 | 5,016.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 0.00 | 0.00 | 5,116.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,298.9 | 0.00 | 0.00 | 5,215.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **Castle Peak** | | | | | | | | | |
| 5,300.0 | 0.00 | 0.00 | 5,216.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 0.00 | 0.00 | 5,316.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 0.00 | 0.00 | 5,416.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,593.9 | 0.00 | 0.00 | 5,510.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **Uteland Butte** | | | | | | | | | |
| 5,600.0 | 0.00 | 0.00 | 5,516.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,653.9 | 0.00 | 0.00 | 5,570.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 1** | | | | | | | | | |
| 5,700.0 | 0.00 | 0.00 | 5,616.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 0.00 | 0.00 | 5,716.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,808.9 | 0.00 | 0.00 | 5,725.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **Wasatch** | | | | | | | | | |
| 5,900.0 | 0.00 | 0.00 | 5,816.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 5,923.9 | 0.00 | 0.00 | 5,840.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 2** | | | | | | | | | |
| 6,000.0 | 0.00 | 0.00 | 5,916.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 6,016.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,193.9 | 0.00 | 0.00 | 6,110.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 3** | | | | | | | | | |
| 6,200.0 | 0.00 | 0.00 | 6,116.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 0.00 | 0.00 | 6,216.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 6,316.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 0.00 | 0.00 | 6,416.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,503.9 | 0.00 | 0.00 | 6,420.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 4** | | | | | | | | | |
| 6,600.0 | 0.00 | 0.00 | 6,516.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 0.00 | 0.00 | 6,616.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,768.9 | 0.00 | 0.00 | 6,685.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 4A** | | | | | | | | | |
| 6,800.0 | 0.00 | 0.00 | 6,716.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 6,868.9 | 0.00 | 0.00 | 6,785.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 5** | | | | | | | | | |
| 6,900.0 | 0.00 | 0.00 | 6,816.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 6,916.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,063.9 | 0.00 | 0.00 | 6,980.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 6** | | | | | | | | | |
| 7,100.0 | 0.00 | 0.00 | 7,016.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |

# Bill Barrett Corp

## Planning Report

| | | | |
|---|---|---|---|
| **Database:** | Compass | **Local Co-ordinate Reference:** | Well 16-16D-46 BTR |
| **Company:** | BILL BARRETT CORP | **TVD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Project:** | DUCHESNE COUNTY, UT (NAD 27) | **MD Reference:** | WELL @ 6581.0ft (Original Well Elev) |
| **Site:** | 16-16D-46 BTR | **North Reference:** | True |
| **Well:** | 16-16D-46 BTR | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | 16-16D-46 BTR | | |
| **Design:** | Design #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|---|---|---|---|---|---|---|---|---|
| 7,200.0 | 0.00 | 0.00 | 7,116.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 0.00 | 0.00 | 7,216.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,316.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,403.9 | 0.00 | 0.00 | 7,320.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **CR 7** | | | | | | | | | |
| 7,500.0 | 0.00 | 0.00 | 7,416.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.00 | 0.00 | 7,516.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,616.1 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| 7,703.9 | 0.00 | 0.00 | 7,620.0 | -611.2 | 342.5 | 700.6 | 0.00 | 0.00 | 0.00 |
| **TD - 16-16D PBHL** | | | | | | | | | |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 1,570.6 | 1,570.0 | Green River | | 0.00 | |
| 2,144.9 | 2,130.0 | Mahogany | | 0.00 | |
| 3,426.9 | 3,370.0 | TGR3 | | 0.00 | |
| 4,262.2 | 4,180.0 | Douglas Creek | | 0.00 | |
| 4,643.9 | 4,560.0 | 3PT MKR | | 0.00 | |
| 5,083.9 | 5,000.0 | Black Shale Facies | | 0.00 | |
| 5,298.9 | 5,215.0 | Castle Peak | | 0.00 | |
| 5,593.9 | 5,510.0 | Uteland Butte | | 0.00 | |
| 5,653.9 | 5,570.0 | CR 1 | | 0.00 | |
| 5,808.9 | 5,725.0 | Wasatch | | 0.00 | |
| 5,923.9 | 5,840.0 | CR 2 | | 0.00 | |
| 6,193.9 | 6,110.0 | CR 3 | | 0.00 | |
| 6,503.9 | 6,420.0 | CR 4 | | 0.00 | |
| 6,768.9 | 6,685.0 | CR 4A | | 0.00 | |
| 6,868.9 | 6,785.0 | CR 5 | | 0.00 | |
| 7,063.9 | 6,980.0 | CR 6 | | 0.00 | |
| 7,403.9 | 7,320.0 | CR 7 | | 0.00 | |
| 7,703.9 | 7,620.0 | TD | | 0.00 | |

**SURFACE USE PLAN**

BILL BARRETT CORPORATION

***16-16D-46 BTR Well Pad***
NE SE, 1676' FSL and 1303' FEL, Section 16, T4S-R6W, USB&M (surface hole)
SE SE, 1061' FSL and 953' FEL, Section 16, T4S-R6W, USB&M (bottom hole)
Duchesne County, Utah

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The onsite inspection for this pad occurred on August 18, 2011. Site specific conditions or changes as a result of that onsite are indicated below. Plat changes requested at the onsite are reflected within this APD.

a) Rotate pad 10 to 20 degrees to keep pit in entirely cut, reduce the amount of fill at corner 2 and maximize interim reclamation;
b) Construct drainage around the cut slope;
c) Maintain topsoil away from drainages;
d) Install silt fences as necessary.

The excavation contractor would be provided with an approved copy of the surface use plan of operations before initiating construction.

1. Existing Roads:

a. The proposed well site is located approximately 11.2 miles southwest of Duchesne, Utah. Maps and directions reflecting the route to the proposed well site are included (see Topographic maps A and B).

b. The existing State Highway 191 would be utilized from Duchesne for 3.5 miles to the existing BBC maintained Skitzy Road that would be utilized for 6.6 miles and provides access to the planned new access road.

c. Project roads would require routine year-round maintenance to provide year-round access. Maintenance would include inspections, reduction of ruts and holes, maintenance to keep water off the road, replacement of surfacing materials, and clearing of sediment blocking ditches and culverts. Should snow removal become necessary, roads would be cleared with a motor grader and snow would be stored along the down gradient side to prohibit runoff onto the road. Aggregate would be used as necessary to maintain a solid running surface and minimize dust generation.

d. Vehicle operators would obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions. Travel would be limited to the existing access roads and proposed access road.

e. The use of roads under State and Duchesne County Road Department maintenance are necessary to access the project area with no improvements proposed. No encroachment or pipeline crossing permits are required.

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f. All existing roads would be maintained and kept in good repair during all phases of operation.

2. Planned Access Road:

a. Approximately 3,067 feet of new access road trending southwest is planned from the proposed 8-16D-46 BTR access road. The 8-16D-46 BTR access has been applied for and continues an additional 2,517 feet to the existing Skitzy access road (see Topographic Map B). The access road crosses entirely Ute Tribe surface.

b. The planned access road would be constructed to a 30-foot ROW width with an 18-foot travel surface. See section 12.d. below for disturbance estimates.

c. New road construction and improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and a grader used to smooth the running surface.

d. The proposed road would be constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes.

e. A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.

f. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust.

g. Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.

h. Turnouts are not proposed.



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i. Four 24-inch and one 48-inch culverts and no low-water crossings are anticipated. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.

j. No gates or cattle guards are anticipated at this time.

k. Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.

l. All access roads and surface disturbing activities would conform to the appropriate standard, **no higher than necessary**, to accommodate their intended function adequately as outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition – Revised 2007.

m. The operator would be responsible for all maintenance needs of the new access road.

3. Location of Existing Wells (see One-Mile Radius Map):

a. Following is a list of wells with surface hole locations within a one-mile radius of the proposed pad:

| | |
|---|---|
| i. water wells | none |
| ii. injection wells | none |
| iii. disposal wells | none |
| iv. drilling wells | none |
| v. temp shut-in wells | none |
| vi. producing wells | two |
| vii. abandoned wells | three |

4. Location of Production Facilities

a. Surface facilities would consist of a wellhead, separator, gas meter, (1) 500 gal methanol tank, (1) 500 glycol tank, (3) 500 bbl oil tanks, (1) 500 bbl water tank, (1) 500 bbl test tank, (1) 1000 gal propane tank, a pumping unit or Roto-flex unit or gas lift unit with a natural gas fired motor, solar panels, solar chemical and methanol pumps and one trace pump. See attached proposed facility diagram.

b. Most wells would be fitted with a pump jack or Roto-flex unit or gas lift to assist liquid production if liquid volumes and/or low formation pressures require it. Plunger lift systems do not require any outside source of energy. The prime mover for pump jacks or Roto-flex units would be small (75 horsepower or less), natural gas-fired internal combustion engines. If a gas lift is installed, it would be set on a 10 ft x 15 ft pad and the prime mover would be a natural gas-fired

internal combustion engine rated at 200 horsepower or less or an electric compressor of similar horsepower powered by a generator.

c. The tank battery would be surrounded by a secondary containment berm of sufficient capacity to contain 1.1 times the entire capacity of the largest single tank and sufficient freeboard to contain precipitation. All loading lines and valves would be placed inside the berm surrounding the tank battery or would utilize catchment basins to contain spills. All liquid hydrocarbon production and measurement shall conform to the provisions of 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4 for the measurement of oil.

d. Gas meter run(s) would be constructed and located on lease within 500 feet of the wellheads. Meter runs would be housed and/or fenced. As practicably feasible, meters would be equipped with remote telemetry monitoring systems. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.

e. A combustor may be installed at this location for control of associated condensate tank emissions. A combustor ranges from 24 inches to 48 inches wide and is approximately 27 ft tall. Combustor placement would be on existing disturbance.

f. Approximately 3,071 feet of pipeline corridor (see Topographic Map C) containing up to three lines (one gas pipeline up to 8 inch in diameter, one water line up to 4 inch in diameter and one residue line up to 4 inch in diameter) is proposed trending northeast to the proposed 8-16D-46 BTR pipeline corridor. The 8-16D-46 BTR pipeline corridor has been applied for and continues 2,517' to the existing Skitzy area pipeline corridor. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby BBC wells. The pipeline crosses entirely Ute Tribe surface.

g. The new segment of gas pipeline would be surface laid within a 30 foot wide pipeline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.

h. Construction of the ROW would temporarily utilize the 30 foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.

i. Pipeline construction methods and practices would be planned and conducted by BBC with the objective of enhancing reclamation and fostering the re-establishment of the native plant community.

j. All permanent above-ground structures would be painted a flat, non-reflective Beetle Green color, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation.



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Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.

k. Site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 would be adhered to. Any modifications to proposed facilities would be reflected in the site security diagram submitted.

l. The site would require periodic maintenance to ensure that drainages are kept open and free of debris, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

5. Location and Type of Water Supply:

a. Water for the drilling and completion would be trucked from any of the following locations:

| Water Right No. and Application or Change No. | Applicant | Allocation | Date | Point of Diversion | Source |
|---|---|---|---|---|---|
| 43-180 | Duchesne City Water Service District | 5 cfs | 8/13/2004 | Knight Diversion Dam | Duchesne River |
| 43-1202, Change a13837 | Myton City | 5.49 cfr and 3967 acre feet | 3/21/1986 | Knight Diversion Dam | Duchesne River |
| 43-10444, Appln A57477 | Duchesne County Upper Country Water | 2 cfs | 1994 | Ditch at Source | Cow Canyon Spring |
| 43-10446, Appln F57432 | Duchesne County Upper Country Water | 1.58 cfs | 1994 | Ditch at Source | Cow Canyon Spring |
| 43-1273, Appln A17462 | J.J.N.P. Company | 7 cfs | 1946 | Strawberry River | Strawberry River |
| 43-1273, Appln t36590 | J.J.N.P. Company | 4 cfs | 6/03/2010 | Strawberry River | Strawberry River |

b. No new water well is proposed with this application.

c. Should additional water sources be pursued they would be properly permitted through the State of Utah – Division of Water Rights.

d. Water use would vary in accordance with the formations to be drilled but would be up to approximately 5.41 acre feet for drilling and completion operations.

6. Source of Construction Material:

a. The use of materials would conform to 43 CFR 3610.2-3.



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b. No construction materials would be removed from the lease or EDA area.

c. If any additional gravel is required, it would be obtained from a local supplier having a permitted source of materials within the general area.

7. Methods of Handling Waste Disposal:

a. All wastes associated with this application would be contained and disposed of utilizing approved facilities.

b. The reserve pit would be constructed so as not to leak, break or allow any discharge.

c. The reserve would be lined with 12 mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay straw, dirt and/or bentonite if rock is encountered during excavation. The liner would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit. A minimum of two feet of free board would be maintained between the maximum fluid level and the top of the reserve pit at all times.

d. To deter livestock from entering the pit, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced.

e. Drill cuttings would be contained in the pit and buried on-site for a period not to exceed six months, weather permitting

f. Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

| **Disposal Facilities** |
|---|
| 1. RNI Industries, Inc. – Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W |
| 2. Pro Water LLC – Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W |
| 3. RN Industries, Inc. – Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W |
| 4. Water Disposal, Inc. – Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W |
| 5. Unified Water Pits – Sec. 31, T2S-R4W |
| 6. Iowa Tank Line Pits – 8500 BLM Fence Road, Pleasant Valley |



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g. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.

h. Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Duchesne, Utah.

i. Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, BBC could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and $CO_2$ gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.

j. Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne, and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up everyday.

k. Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.

l. A flare pit may be constructed a minimum of 110 feet from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. BBC would flow back as much fluid and gas as possible into pressurized vessels, separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances BBC proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the reserve pit or

placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.

m. Hydrocarbons would be removed from the reserve pit would as soon as practical. In the event immediate removal is not practical, the reserve pit would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

8. Ancillary Facilities:

a. Garbage containers and portable toilets would be located on the well pad.

b. On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers.

c. A powerline corridor is not proposed at this time but may be applied for in the future.

9. Well Site Layout:

a. The well would be properly identified in accordance with 43 CFR 3162.6.

b. The pad layout, cross section diagrams and rig layout are enclosed (see Figures 1 and 2).

c. The pad and road designs are consistent with industry specifications.

d. The pad has been staked at its maximum size of 400 feet x 245 feet with an inboard reserve pit size of 70 feet x 235 feet x 8 feet deep. See section 12.d below for disturbance estimates.

e. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad.

f. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.

g. Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by BBC as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity.



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h. All cut and fill slopes would be such that stability can be maintained for the life of the activity.

i. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.

j. Water application may be implemented if necessary to minimize the amount of fugitive dust.

k. All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

10. Plan for Restoration of the Surface:

a. A site specific reclamation plan would be submitted, if requested, within 90 days of location construction to the surface managing agency.

b. Site reclamation would be accomplished for portions of the well pad not required for the continued operation of the well on this pad within six months of completion, weather permitting.

c. The operator would control noxious weeds along access road use authorizations and well site by spraying or mechanical removal, according to the Utah Noxious Weed Act and as set forth in the approved surface damage agreements.

d. Rat and mouse holes would be filled and compacted from bottom to top immediately upon release of the drilling rig from location. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. The reserve pit would be allowed to dry prior to the commencement of backfilling work. No attempts would be made to backfill the reserve pit until it is free of standing water. Once dry, the liner would be torn and perforated before backfilling.

e. The reserve pit and that portion of the location not needed for production facilities/operations would be recontoured to the approximate natural contours. Areas not used for production purposes would be backfilled and blended into the surrounding terrain, reseeded and erosion control measures installed. Mulching, erosion control measures and fertilization may be required to achieve acceptable stabilization. Back slopes and fore slopes would be reduced as practical and scarified with the contour. The reserved topsoil would be evenly distributed over the slopes and scarified along the contour. Slopes would be seeded with the Ute Tribe specified seed mix.

f. Topsoil salvaged from the drill site and stored for more than one year would be placed at the location indicated on the well site layout drawing and graded to a depth optimum to maintain topsoil viability, seeded with the Ute Tribe



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prescribed seed mixture and covered with mulch for protection from wind and water erosion and to discourage the invasion of weeds.

11. Surface and Mineral Ownership:

a. Surface ownership – Ute Indian Tribe - 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

b. Mineral ownership – Ute Indian Tribe - 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

12. Other Information:

a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Montgomery as MOAC Report No. 11-178 dated June 23, 2011.

b. BBC would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.

c. Project personnel and contractors would be educated on and subject to the following requirements:

- No dogs or firearms within the Project Area.
- No littering within the Project Area.
- Smoking within the Project Area would only be allowed in off-operator active locations or in specifically designated smoking areas. All cigarette butts would be placed in appropriate containers and not thrown on the ground or out windows of vehicles; personnel and contractors would abide by all fire restriction orders.
- Campfires or uncontained fires of any kind would be prohibited.
- Portable generators used in the Project Area would have spark arrestors.

d. Disturbance estimates:

| **Approximate Acreage Disturbances** | | | |
|---|---|---|---|
| Well Pad | | 3.048 | acres |
| Access | 3,067 feet | 2.094 | acres |
| Pipeline | 3,081 feet | 2.104 | acres |
| | **Total** | **7.246** | **acres** |

Bill Barrett Corporation
Surface Use Plan
#16-16D-46 BTR
Duchesne County, UT

## OPERATOR CERTIFICATION

Certification:

I hereby certify that I, or someone under my direction supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein would be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application and that bond coverage is provided under Bill Barrett Corporations federal nationwide bond. These statements are subject to the provisions of 18 U.S.C. 1001 for the filings of false statements.

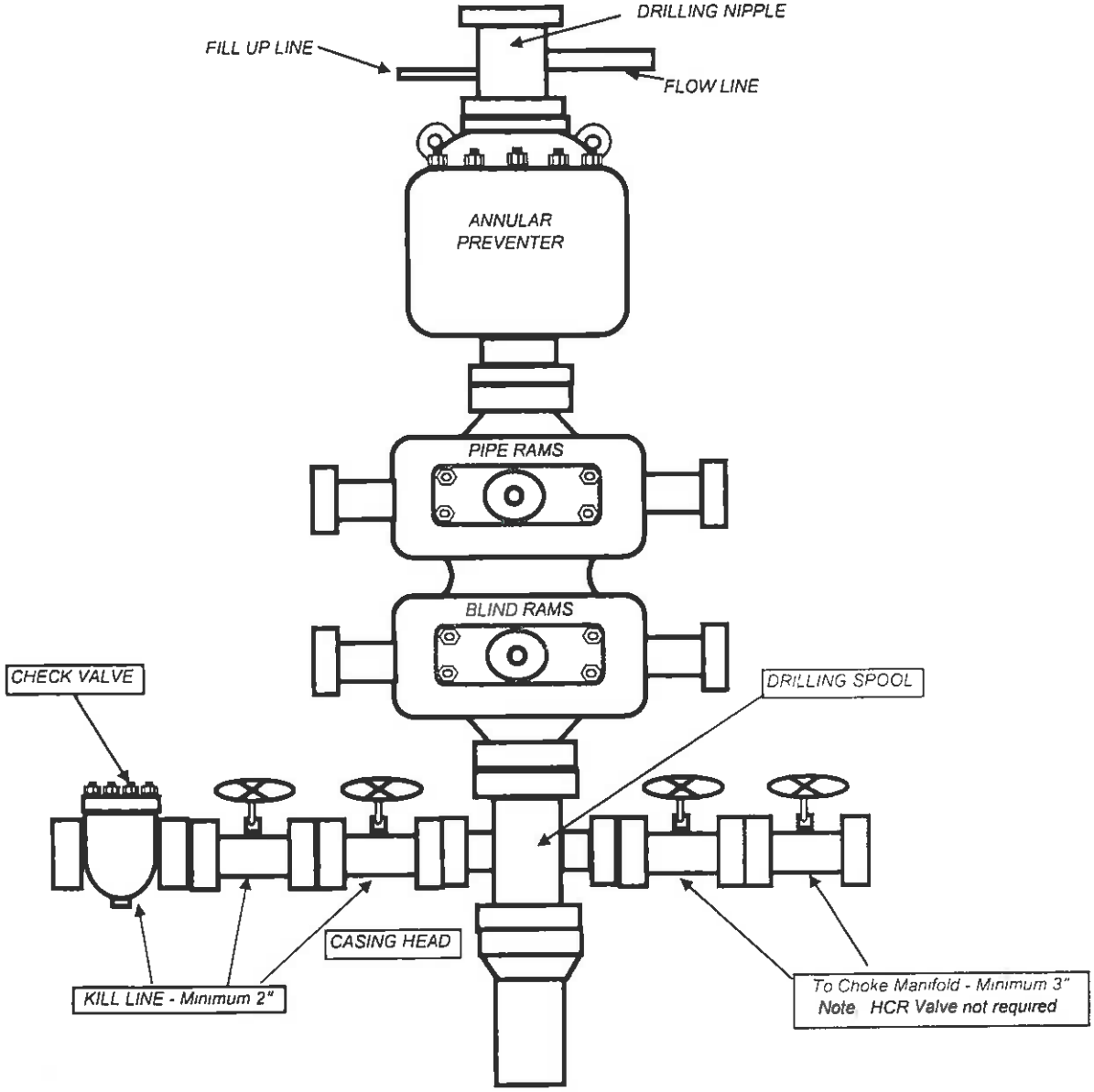
| | |
|---|---|
| Executed this | 13th day of September 2011 |
| Name: | Venessa Langmacher |
| Position Title: | Senior Permit Analyst |
| Address: | 1099 18th Street, Suite 2300, Denver, CO 80202 |
| Telephone: | 303-312-8172 |
| E-mail: | vlangmacher@billbarrettcorp.com |
| Field Representative | Kary Eldredge / Bill Barrett Corporation |
| Address: | 1820 W. Highway 40, Roosevelt, UT 84066 |
| Telephone: | 435-725-3515 (office); 435-724-6789 (mobile) |
| E-mail: | keldredge@billbarrettcorp.com |

Venessa Langmacher

Venessa Langmacher, Senior Permit Analyst

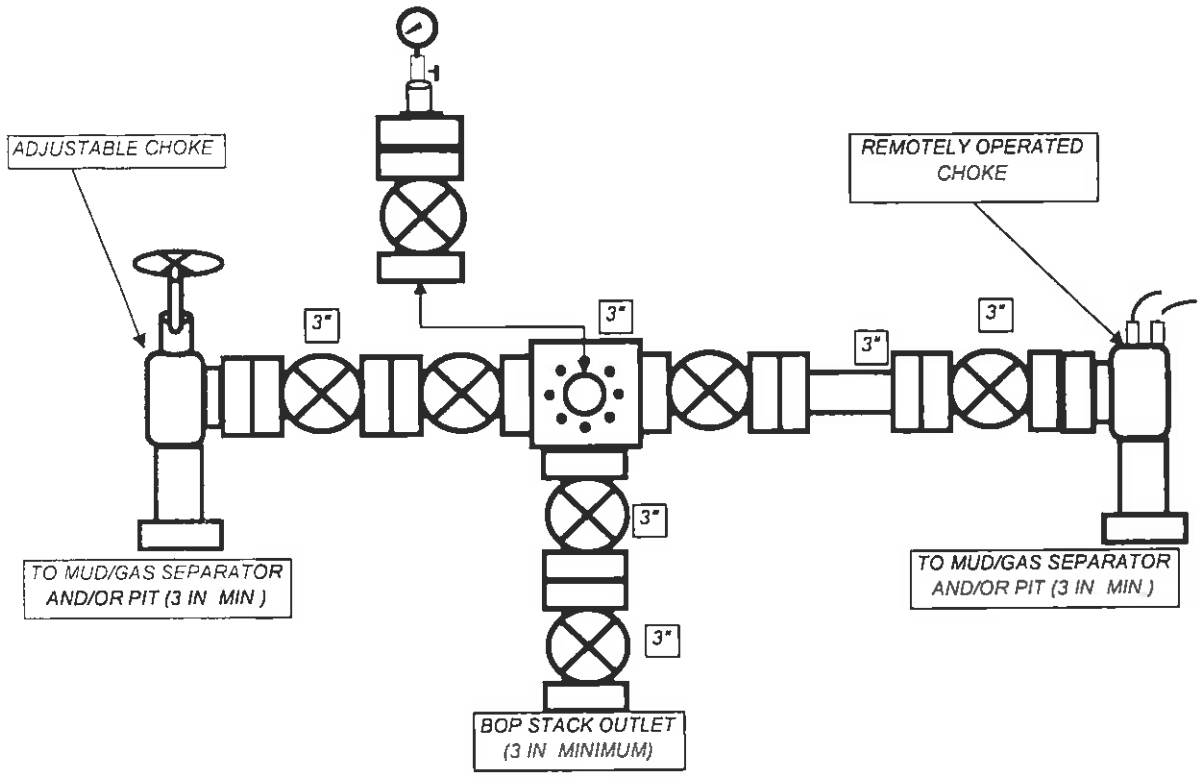
# BILL BARRETT CORPORATION

## TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



# BILL BARRETT CORPORATION

## *TYPICAL 5,000 p.s.i. CHOKE MANIFOLD*



**Bill Barrett Corporation**

September 13, 2011

Ms. Diana Mason – Petroleum Technician
State of Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Directional Drilling R649-3-11
**Blacktail Ridge Area #16-16D-46 BTR Well**
Surface: 1,676' FSL & 1,303' FEL, NESE, 16-T4S-R6W, USM
Bottom Hole: 1,061' FSL & 953' FEL, SESE, 16-T4S-R6W, USM
Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill the above referenced well, we hereby submit this letter in accordance with Oil & Gas Conservation Rules R649-2, R649-3, R649-10 and R649-11, pertaining to the Location and Siting of Wells.

- The proposed location is within our Blacktail Ridge Area.
- BBC is permitting this well as a directional well in order to minimize surface disturbance. By locating the well at the surface location and directionally drilling from this location, BBC will be able to utilize the existing road and pipelines in the area.
- The well will be drilled under an Exploration and Development Agreement between the Ute Indian Tribe and Ute Distribution Corporation. Ute Energy, LLC owns a right to participate in this well.
- BBC certifies that it is the working interest owner of all lands within 460 feet of the proposed well location, and together with Ute Energy, LLC, we own 100% of the working interest in these lands.

Based on the information provided, BBC requests that the permit be granted pursuant to R649-3-11. Should you have any questions or need further information, please contact me at 303-312-8544.

Sincerely,

Teresa Langmacher for

David Watts
Landman

1099 18TH STREET
SUITE 2300
DENVER, CO 80202
P 303.293.9100
F 303.291.0420

API Well Number: 43013509560000

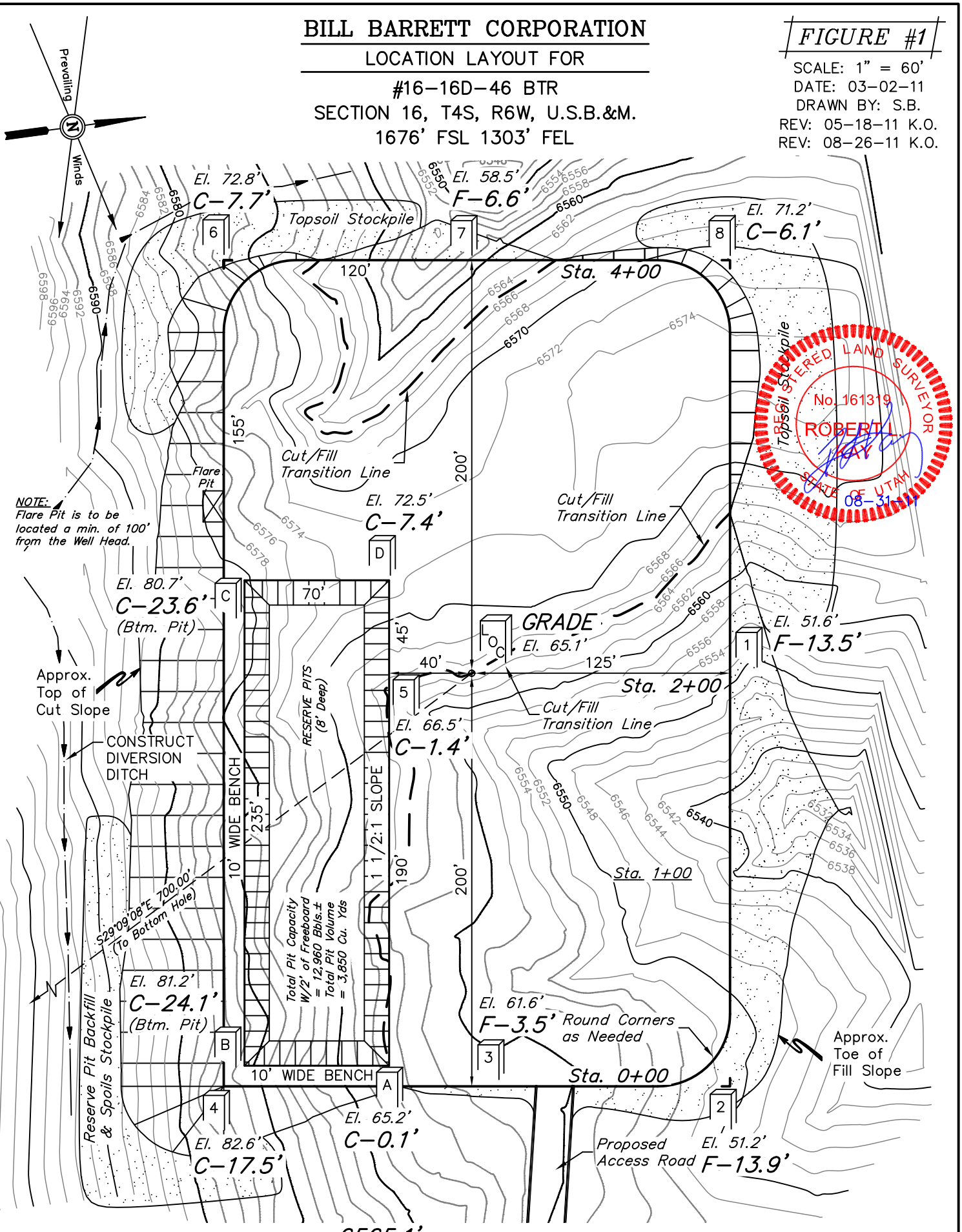
# BILL BARRETT CORPORATION

## LOCATION LAYOUT FOR

#16-16D-46 BTR
SECTION 16, T4S, R6W, U.S.B.&M.
1676' FSL 1303' FEL

**FIGURE #1**

SCALE: 1" = 60'
DATE: 03-02-11
DRAWN BY: S.B.
REV: 05-18-11 K.O.
REV: 08-26-11 K.O.




Elev. Ungraded Ground At Loc. Stake = 6565.1'
FINISHED GRADE ELEV. AT LOC. STAKE = 6565.1'


UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



**RECEIVED: September 13, 2011**

1" = 40'
X-Section Scale
1" = 100'

DATE: 03-02-11
DRAWN BY: S.B.
REV: 05-18-11 K.O.
REV: 08-26-11 K.O.

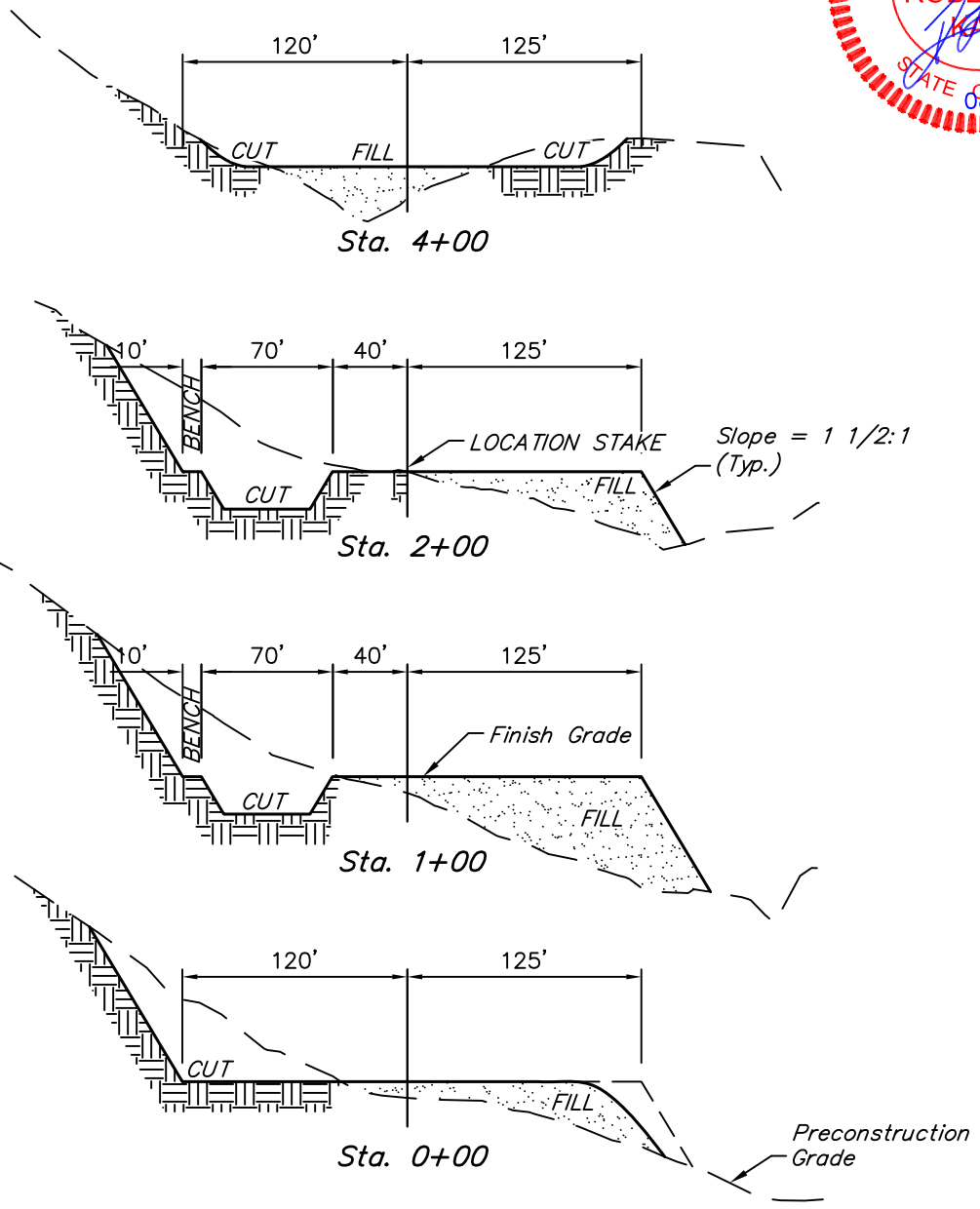
# BILL BARRETT CORPORATION

## TYPICAL CROSS SECTIONS FOR

#16-16D-46 BTR
SECTION 16, T4S, R6W, U.S.B.&M.
1676' FSL 1303' FEL

FIGURE #2

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH
08-31-11




* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

## APPROXIMATE YARDAGES

| | | |
|---|---|---|
| (12") Topsoil Stripping | = | 4,940 Cu. Yds. |
| Remaining Location | = | 21,240 Cu. Yds. |
| TOTAL CUT | = | 26,180 CU.YDS. |
| FILL | = | 19,310 CU.YDS. |

| | | |
|---|---|---|
| EXCESS MATERIAL | = | 6,870 Cu. Yds. |
| Topsoil & Pit Backfill (1/2 Pit Vol.) | = | 6,870 Cu. Yds. |
| EXCESS UNBALANCE (After Interim Rehabilitation) | = | 0 Cu. Yds. |

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RECEIVED: September 13, 2011

API Well Number: 43013509560000

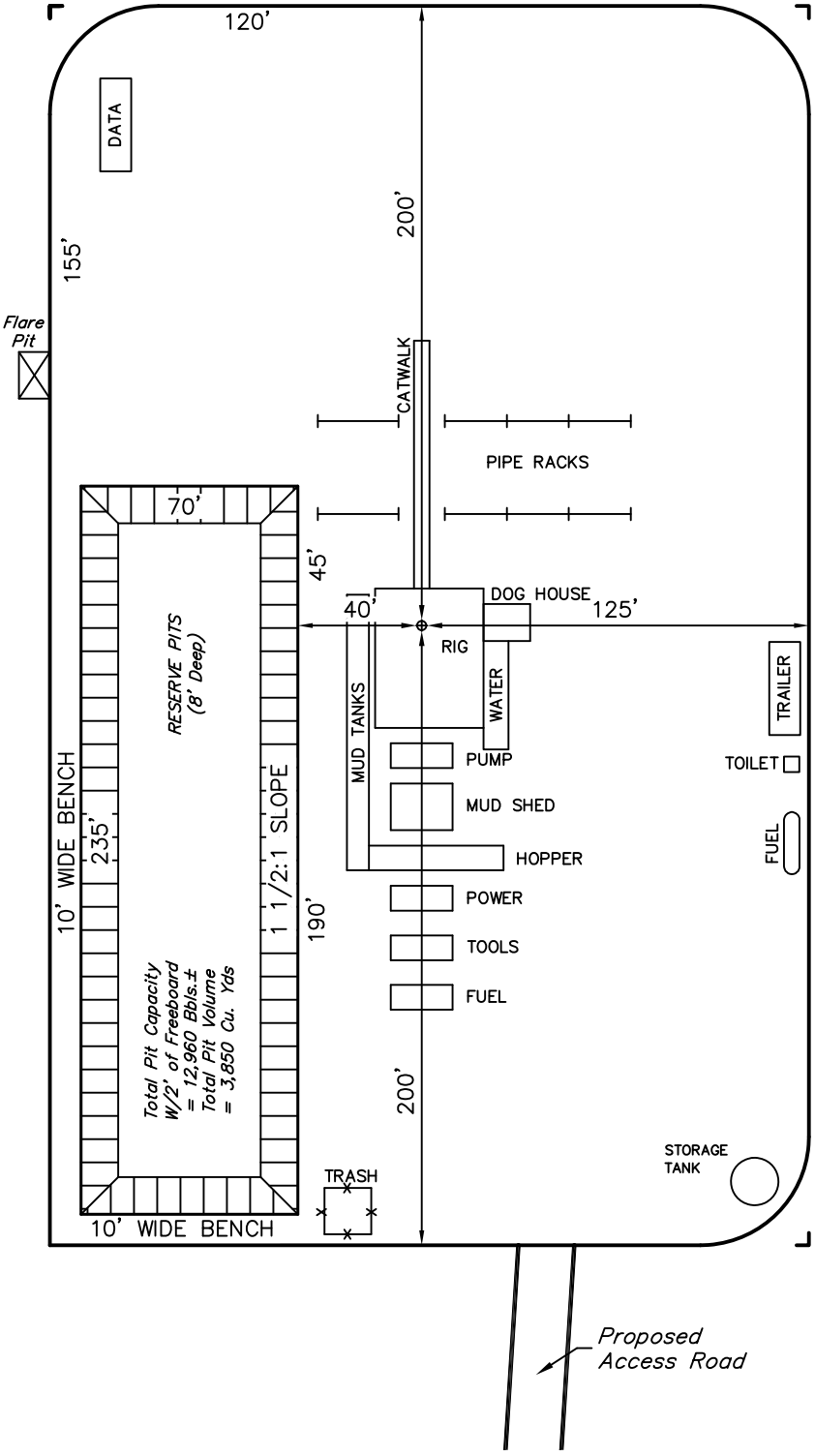
# BILL BARRETT CORPORATION

## TYPICAL RIG LAYOUT FOR

#16-16D-46 BTR
SECTION 16, T4S, R6W, U.S.B.&M.
1676' FSL 1303' FEL

FIGURE #3
SCALE: 1" = 60'
DATE: 03-02-11
DRAWN BY: S.B.
REV: 05-18-11
REV: 08-26-11 K.O.

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH
08-31-11




NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.


UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



RECEIVED: September 13, 2011

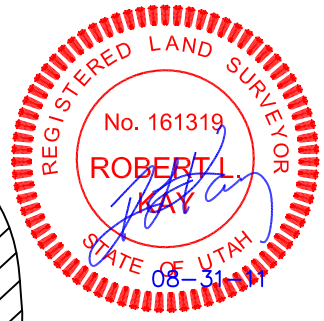
API Well Number: 43013509560000

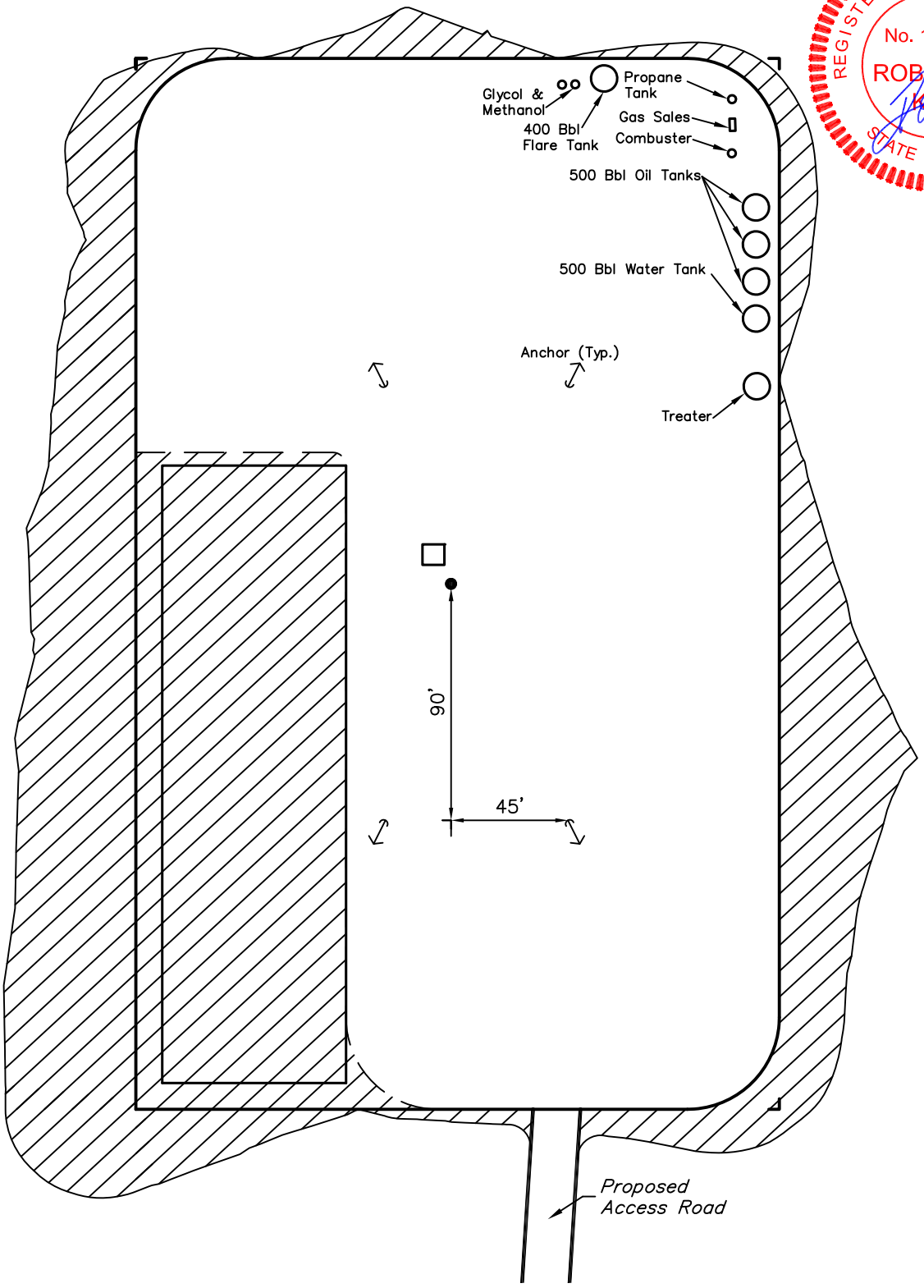
# BILL BARRETT CORPORATION

## INTERIM RECLAMATION PLAN FOR

#16-16D-46 BTR
SECTION 16, T4S, R6W, U.S.B.&M.
1676' FSL 1303' FEL

FIGURE #3
SCALE: 1" = 60'
DATE: 07-18-11
DRAWN BY: S.B.
REV: 08-31-11 K.O.




INTERIM RECLAMATION

APPROXIMATE ACREAGES
UN-RECLAIMED = ± 1.773 ACRES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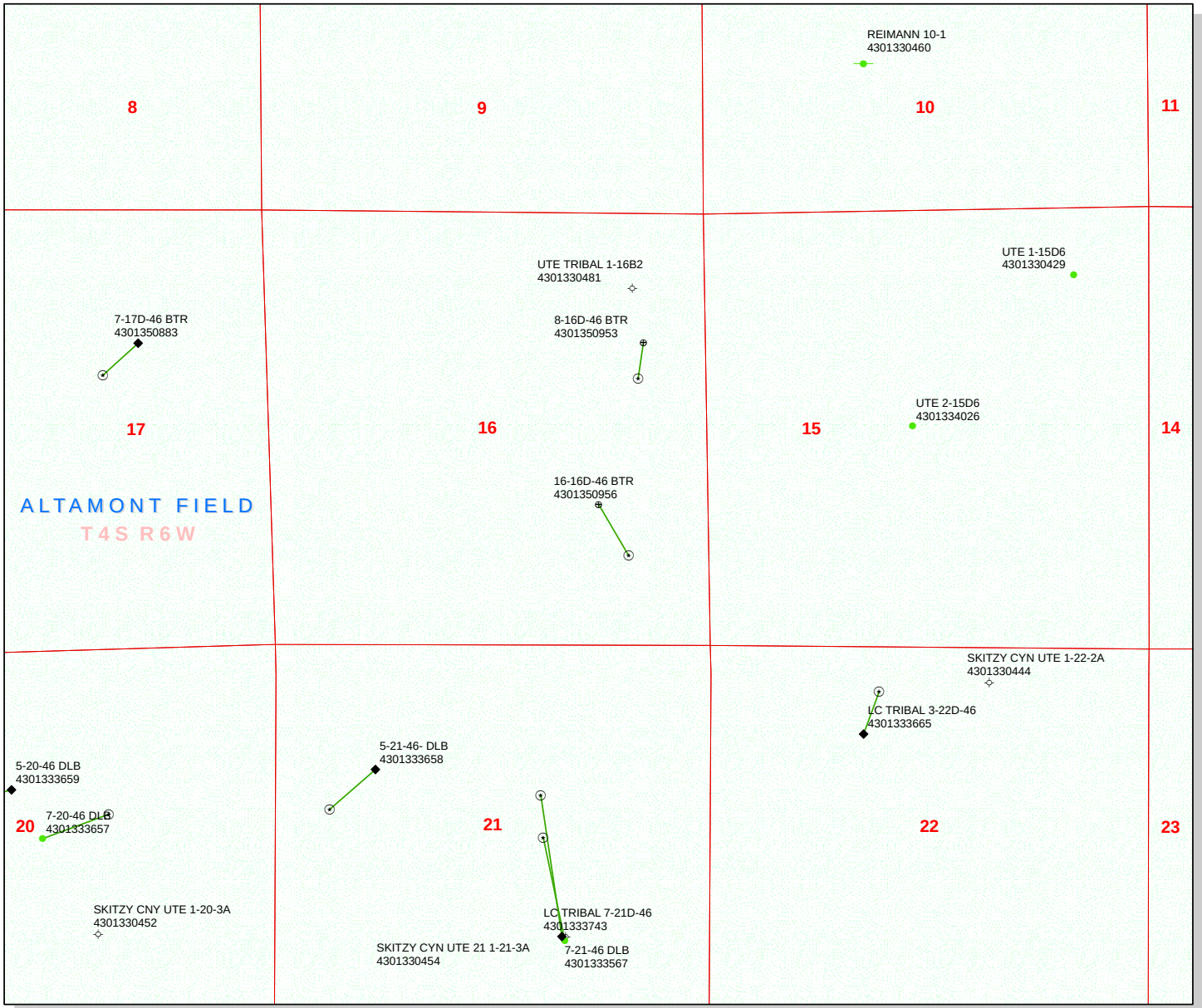
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



RECEIVED: September 13, 2011

API Well Number: 43013509560000




**API Number: 4301350956**

**Well Name: 16-16D-46 BTR**

**Township T0.4 . Range R0.6 . Section 16**

**Meridian: UBM**

Operator: BILL BARRETT CORP

Map Prepared:
Map Produced by Diana Mason

**Units**
**STATUS**
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

**Fields**
**STATUS**
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED
- Sections
- Township

**Wells Query**
**Status**
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well


1,500 750 0 1,500 Feet

1:14,795

**RECEIVED: September 16, 2011**

# WORKSHEET
# APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 9/13/2011
**API NO. ASSIGNED:** 43013509560000
**WELL NAME:** 16-16D-46 BTR
**OPERATOR:** BILL BARRETT CORP (N2165)
**PHONE NUMBER:** 303 312-8172
**CONTACT:** Venessa Langmacher

**PROPOSED LOCATION:** NESE 16 040S 060W
**Permit Tech Review:** ☑

**SURFACE:** 1676 FSL 1303 FEL
**Engineering Review:** ☐

**BOTTOM:** 1061 FSL 0953 FEL
**Geology Review:** ☑

**COUNTY:** DUCHESNE
**LATITUDE:** 40.13059
**LONGITUDE:** -110.56241
**UTM SURF EASTINGS:** 537282.00
**NORTHINGS:** 4442133.00
**FIELD NAME:** ALTAMONT
**LEASE TYPE:** 2 - Indian
**LEASE NUMBER:** 2OG0005608
**PROPOSED PRODUCING FORMATION(S):** GREEN RIVER-WASATCH
**SURFACE OWNER:** 2 - Indian
**COALBED METHANE:** NO

**RECEIVED AND/OR REVIEWED:**

- ☑ **PLAT**
- ☑ **Bond:** INDIAN - LPM8874725
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Duchesne City Culinary Water Dock
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

**Commingling Approved**

**LOCATION AND SITING:**

- ☐ **R649-2-3.**

**Unit:**

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

**Board Cause No:** Cause 139-84
**Effective Date:** 12/31/2008
**Siting:** 660' Fr Drl U Bdry & 1320' Fr Other Wells

- ☑ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**
4 - Federal Approval - dmason
15 - Directional - dmason

**RECEIVED: September 20, 2011**

GARY R. HERBERT
*Governor*
GREGORY S. BELL
*Lieutenant Governor*

**State of Utah**
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
*Executive Director*
**Division of Oil, Gas and Mining**
JOHN R. BAZA
*Division Director*

# Permit To Drill

**********

**Well Name:** 16-16D-46 BTR
**API Well Number:** 43013509560000
**Lease Number:** 2OG0005608
**Surface Owner:** INDIAN
**Approval Date:** 9/20/2011

**Issued to:**
BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

**Authority:**
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-84. The expected producing formation or pool is the GREEN RIVER-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**General:**
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

**Notification Requirements:**
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

**Reporting Requirements:**

API Well No: 43013509560000

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SEP 13 2011

BLM

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
2OG0005608

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

8. Lease Name and Well No.
16-16D-46 BTR

2. Name of Operator
BILL BARRETT CORPORATION
Contact: VENESSA LANGMACHER
E-Mail: vlangmacher@billbarrettcorp.com

9. API Well No.
43-013-50956.

3a. Address
1099 18TH STREET SUITE 2300
DENVER, CO 80202

3b. Phone No. (include area code)
Ph: 303-312-8172
Fx: 303-291-0420

10. Field and Pool, or Exploratory
ALTAMONT

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NESE 1676FSL 1303FEL 40.130469 N Lat, 110.563131 W Lon

At proposed prod. zone SESE 1061FSL 953FEL 40.128794 N Lat, 110.561908 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 16 T4S R6W Mer UBM

14. Distance in miles and direction from nearest town or post office*
11.2 MILES SOUTHWEST OF DUCHESNE, UT

12. County or Parish
DUCHESNE

13. State
UT

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
953'

16. No. of Acres in Lease
66101.00

17. Spacing Unit dedicated to this well
640.00

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.
3350'

19. Proposed Depth
7704 MD
7620 TVD

20. BLM/BIA Bond No. on file
LPM8874725

21. Elevations (Show whether DF, KB, RT, GL, etc.
6565 GL

22. Approximate date work will start
06/01/2012

23. Estimated duration
60 DAYS (D&C)

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
VENESSA LANGMACHER Ph: 303-312-8172

Date
09/13/2011

Title
SENIOR PERMIT ANALYST

Approved by (Signature)

Name (Printed/Typed)
Jerry Kenczka

Date
APR 13 2012

Title
Assistant Field Manager
Lands & Mineral Resources

Office
VERNAL FIELD OFFICE

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
MAY 02 2012
DIV OF OIL, GAS, & MINING

**Additional Operator Remarks (see next page)**

**Electronic Submission #117444 verified by the BLM Well Information System**
**For BILL BARRETT CORPORATION, sent to the Vernal**
**Committed to AFMSS for processing by ROBIN R. HANSEN on 09/15/2011**

NOTICE OF APPROVAL

UDOGM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

UTSS0793AE

NOS 8/2/2011

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

## *CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL*

| | | | |
|---|---|---|---|
| **Company:** | **Bill Barrett Corporation** | **Location:** | **NESE, Sec. 16, T4S, R6W** |
| **Well No:** | **16-16D-46 BTR** | **Lease No:** | **2OG0005608** |
| **API No:** | **43-013-50956** | **Agreement:** | **N/A** |

# OFFICE NUMBER: (435) 781-4400

# OFFICE FAX NUMBER: (435) 781-3420

## A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

## NOTIFICATION REQUIREMENTS

| | | |
|---|---|---|
| Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist) | - | The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday. |
| Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist) | - | Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig. |
| Spud Notice (Notify BLM Petroleum Engineer) | - | Twenty-Four (24) hours prior to spudding the well. |
| Casing String & Cementing (Notify BLM Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings to:blm_ut_vn_opreport@blm.gov. |
| BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to initiating pressure tests. |
| First Production Notice (Notify BLM Petroleum Engineer) | - | Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days. |

***SURFACE USE PROGRAM***
***CONDITIONS OF APPROVAL (COAs)***

**Additional Stipulations:**

- Production Equipment will be painted Beetle Green to help blend into the surrounding vegetation.

- See Exhibit One of the approved EA U&O-FY12-Q2-059 for additional mitigation measures that must be followed for each of the proposed well locations.

**General Conditions of Approval:**

- A 30' foot corridor right-of-way shall be approved. Upon completion of each pipeline in corridor, they shall be identified and filed with the Ute Tribe.

- The Ute Tribe Energy & Minerals Department is to be notified, in writing 48 hours prior to construction of pipelines.

- Construction Notice shall be given to the department on the Ute Tribe workdays, which are Monday through Thursday. The Company understands that they may be responsible for costs incurred by the Ute Tribe after hours.

- The Company shall inform contractors to maintain construction of pipelines within the approved ROW's.

- The Company shall assure the Ute Tribe that "ALL CONTRACTORS, INCLUDING SUB-CONTRACTORS, LEASING CONTRACTORS, AND ETC." have acquired a current and valid Ute Tribal Business License and have "Access Permits" prior to construction, and will have these permits in all vehicles at all times.

- You are hereby notified that working under the *"umbrella"* of a company does not allow you to be in the field, and can be subject to those fines of the Ute Tribe Severance Tax Ordinance.

- Any deviation of submitted APD's and ROW applications the Companies will notify the Ute Tribe and BIA in writing and will receive written authorization of any such change with appropriate authorization.

- Bill Barrett Corporation will implement a "Safety and Emergency Plan." The Company's safety director will ensure its compliance.

- All Company employees and/or authorized personnel (sub-contractors) in the field will have approved applicable APD's, COA's, and/or ROW permits/authorizations on their person(s) during all phases of construction.

- All vehicular traffic, personnel movement, construction/restoration operations should be confined to the area examined and approved, and to the existing roadways and/or evaluated access routes.

- The personnel from the Ute Tribe Energy & Minerals Department should be notified should cultural remains from subsurface deposits be exposed or identified during construction. All construction will cease.

- Upon completion of Application for Corridor Right-Way, the company will notify the Ute Tribe Energy & Minerals Department, so that a Tribal Technician can verify Affidavit of Completion.

***DOWNHOLE PROGRAM***
***CONDITIONS OF APPROVAL (COAs)***

**SITE SPECIFIC DOWNHOLE COAs:**

- Production casing cement shall be brought up and into the surface casing. The minimum cement top is 400 ft. above the surface casing shoe.

**All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to.** The following items are emphasized:

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person

making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to BLM_UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

**OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8164 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start: 6/1/2013 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ✓ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

BBC requests a one year extension for the subject APD.

**Approved by the Utah Division of Oil, Gas and Mining**

**Date:** August 28, 2012

**By:** 

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Venessa Langmacher | 303 312-8172 | Senior Permit Analyst |

| SIGNATURE | DATE |
|---|---|
| N/A | 8/16/2012 |

**RECEIVED: Aug. 16, 2012**

## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

## Request for Permit Extension Validation Well Number 43013509560000

**API:** 43013509560000
**Well Name:** 16-16D-46 BTR
**Location:** 1676 FSL 1303 FEL QTR NESE SEC 16 TWNP 040S RNG 060W MER U
**Company Permit Issued to:** BILL BARRETT CORP
**Date Original Permit Issued:** 9/20/2011

**The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.**

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

**Signature:** Venessa Langmacher **Date:** 8/16/2012
**Title:** Senior Permit Analyst **Representing:** BILL BARRETT CORP

**RECEIVED:** Aug. 16, 2012

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

**11.**

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☑ SPUD REPORT<br>Date of Spud:<br>5/4/2013 | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
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| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

This well was spud on 5/4/13 at 12:00 pm by Triple A Drilling; Rig #TA 4037, Type Soilmec SR/30. Continuous drilling is planned to commence on 6/21/13.

**Accepted by the Utah Division of Oil, Gas and Mining**
**FOR RECORD ONLY**
May 07, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Venessa Langmacher | 303 312-8172 | Senior Permit Analyst |
| **SIGNATURE** N/A | | **DATE** 5/6/2013 |

RECEIVED: May. 06, 2013

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT<br>Report Date:<br>5/31/2013 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
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| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

Well Spud in May 2013. Drilling to resume in June 2013.

**Accepted by the**
**Utah Division of**
**Oil, Gas and Mining**
**FOR RECORD ONLY**
June 06, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Brady Riley | 303 312-8115 | Permit Analyst |
| **SIGNATURE** N/A | | **DATE** 6/5/2013 |

RECEIVED: Jun. 05, 2013

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

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**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

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| TYPE OF SUBMISSION | TYPE OF ACTION | | |
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| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT<br>Report Date:<br>6/30/2013 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
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| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

Attached is the June 2013 Drilling Activity for this well.

**Accepted by the**
**Utah Division of**
**Oil, Gas and Mining**
**FOR RECORD ONLY**
July 11, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Brady Riley | 303 312-8115 | Permit Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 7/9/2013 |

RECEIVED: Jul. 09, 2013

Bill Barrett Corporation

## 16-16D-46 BTR 6/24/2013 06:00 - 6/25/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | DRILLING | 5,300.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 13.00 | 19:00 | 1 | RIGUP & TEARDOWN | HSM - 1 mile rig move. RDRT w/4 trucks, forklifts, moved tubulars, catwalk, BOP wrangler, blooie line, pits, mud products. Scoped derrick in, squatted sub, laid derrick over. |
| 19:00 | 11.00 | 06:00 | 1 | RIGUP & TEARDOWN | Wait on daylight. |

## 16-16D-46 BTR 6/25/2013 06:00 - 6/26/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | DRILLING | 5,300.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 13.00 | 19:00 | 1 | RIGUP & TEARDOWN | HSM - Rig move. MIRU 10 trucks, 2 cranes, 3 forklifts. Rig 100% moved, 75% rigged up. Move camps this a.m. |
| 19:00 | 11.00 | 06:00 | 1 | RIGUP & TEARDOWN | Wait on daylight. |

## 16-16D-46 BTR 6/26/2013 06:00 - 6/27/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | DRILLING | 5,300.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 21.00 | 03:00 | 1 | RIGUP & TEARDOWN | HSM - Rigging up. Move camps. RURT. Trucks released @ noon. Scope derrick, r/u mud line, kelly hose, flare lines, dress out shakers, test pumps, r/u floor, top drive, n/u diverter(as per Nabors), r/u flowline. |

## 16-16D-46 BTR 6/27/2013 06:00 - 6/28/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | DRILLING | 5,300.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 9.00 | 15:00 | 8 | REPAIR RIG | Wait on mechanic until 11:30, repair rig. |
| 15:00 | 1.00 | 16:00 | 21 | OPEN | Rack & strap BHA. Rig on daywork @ 15:00 hrs. |
| 16:00 | 2.50 | 18:30 | 20 | DIRECTIONAL WORK | PU dir tools, bit, mm. |
| 18:30 | 1.00 | 19:30 | 2 | DRILL ACTUAL | Drill 102' - 177'. rpm 30/82, spp 450 psi, dp 275 psi, rop 75 fph.<br>Spud well @ 18:30. |
| 19:30 | 1.00 | 20:30 | 20 | DIRECTIONAL WORK | PU index sub, antenna sub, install mwd. PU 8" NMDC & reamer. |
| 20:30 | 3.50 | 00:00 | 2 | DRILL ACTUAL | Drill 177' - 596'. Rpm 55/168, spp 1250 psi, dp 450 psi, rop 119 fph. |
| 00:00 | 2.00 | 02:00 | 6 | TRIPS | Pull 5 stds HWDP, PU 9 6" DC's. |
| 02:00 | 4.00 | 06:00 | 2 | DRILL ACTUAL | Drill 596' - 1396'. Rpm 55/168, spp 1250 psi, dp 400 psi, rop 200 fph. |

## 16-16D-46 BTR 6/28/2013 06:00 - 6/29/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | DRILLING | 5,300.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.50 | 06:30 | 2 | DRILL ACTUAL | Drill 1396' - 1440'. Wob 15k, rpm 55/173, spp 1500 psi, dp 350 psi, rop 88 fph. |
| 06:30 | 5.00 | 11:30 | 21 | OPEN | C&C f/ST, Got hung up @ 1411'. Work tight hole. Won't rotate or circulate. |
| 11:30 | 1.00 | 12:30 | 21 | OPEN | PU surface jars and 15' pup, jarred string free. LD SJ. |
| 12:30 | 1.00 | 13:30 | 5 | COND MUD & CIRC | Rot & reciprocate, pump lcm sweeps, full returns. C&C f/ST. |
| 13:30 | 2.00 | 15:30 | 6 | TRIPS | ST to DC's. Hole in good shape. |
| 15:30 | 1.00 | 16:30 | 5 | COND MUD & CIRC | C&C & sweep hole f/toh. |
| 16:30 | 3.50 | 20:00 | 6 | TRIPS | Toh. LD 8" tools, dir tools. |
| 20:00 | 4.00 | 00:00 | 12 | RUN CASING & CEMENT | HSM. RU casers and run 9 5/8", 36#, j-55, STC csg as follows: guide shoe, 1 jt csg, float collar, 32 jts csg. Shoe @ 1426'. |
| 00:00 | 2.00 | 02:00 | 5 | COND MUD & CIRC | C&C f/cmt. HSM, RU cementers. |
| 02:00 | 3.00 | 05:00 | 12 | RUN CASING & CEMENT | Cement well as follows: Press test to 3000 psi. Pump 20 bbl H2O spacer, 40 bbls super flush @ 10 ppg, 20 bbl H2O spacer. Mix & pump 160 sx(90 bbls) lead cmt @ 11 ppg, 3.16 yld, 19.48 gps H2O, tail in with 240 sx(57bbls) @ 14.6 ppg, 1.33 yld, 6.31 gps H2O. Shutdown, wash pumps and lines, drop top plug. Diplace cmt w/108 bbls mud @ 8.8 ppg. Max press 280 psi, final press 210 psi. Bumped plug to 800 psi, bled back 3/4 bbl, floats held. Lost circ halfway through displacement, no cmt to surface. |



RECEIVED: Jul. 09, 2013

Bill Barrett Corporation

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 05:00 | 1.00 | 06:00 | 12 | RUN CASING & CEMENT | Run 120' 1" pipe, prepare for 100 sk top job. |



RECEIVED: Jul. 09, 2013

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corp Rig Name/# Nabors M22
Submitted By Pat Clark Phone Number 303-353-5350
Well Name/Number 16-16D-46 BTR
Qtr/Qtr NE/SE Section 16 Township 4S Range 6W
Lease Serial Number
API Number 43-013-50956

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time 6/27/13 9:00 AM ☐ PM ☒

BOPE

☒ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

RECEIVED
JUN 26 2013
DIV. OF OIL, GAS & MINING

Date/Time 6/28/13 15:00 AM ☐ PM ☒

Remarks PLEASE CALL WITH ANY QUESTIONS OR CONCERNS

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corp Rig Name/# Nabors M22
Submitted By Pat Clark Phone Number 303-353-5350
Well Name/Number 16-16D-46 BTR
Qtr/Qtr NE/SE Section 16 Township 4S Range 6W
Lease Serial Number _____
API Number 43-013-50956

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☐ Surface Casing
☐ Intermediate Casing
☒ Production Casing
☐ Liner
☐ Other

Date/Time 7/10/13 9:00 AM ☐ PM ☒

BOPE

☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

RECEIVED
JUL 08 2013
DIV. OF OIL, GAS & MINING

Remarks All times are estimated

–

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corp Rig Name/# Nabors M22
Submitted By Pat Clark Phone Number 303-353-5350
Well Name/Number 16-16D-46 BTR
Qtr/Qtr NE/SE Section 16 Township 4S Range 6W
Lease Serial Number _____
API Number 43-013-50956

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☐ Surface Casing
☒ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time 7/7/13 9:00 AM ☐ PM ☒

BOPE

☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

RECEIVED
JUL 05 2013
DIV. OF OIL, GAS & MINING

Date/Time _____ _____ AM ☐ PM ☐

Remarks All times are estimated

–

# STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ✓ DRILLING REPORT<br>Report Date:<br>7/31/2013 | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

Attached is the July 2013 Drilling Activity for this well.

**Accepted by the**
**Utah Division of**
**Oil, Gas and Mining**
**FOR RECORD ONLY**
August 08, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Brady Riley | 303 312-8115 | Permit Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 8/5/2013 |

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## 16-16D-46 BTR 7/1/2013 06:00 - 7/2/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 21 | OPEN | Wait on pills, try to circ no circ. |
| 07:00 | 4.50 | 11:30 | 6 | TRIPS | Tih to 2000', spot 60 bbl 60% lcm pill, cut up and pump burlap bags, spot 60 bbl 60% lcmpill. Got 60-70% returns while pumping 2nd pill. C&C and build volume. Still losing, pump burlap and 60 bbl 60% lcm pill. |
| 11:30 | 3.00 | 14:30 | 6 | TRIPS | Toh to shoe, squeeze pill into formation. Built to 45 psi (10 bbls pumped), hesitated 5 min, try again, same. Wait 1 hr, try again, same. |
| 14:30 | 3.00 | 17:30 | 6 | TRIPS | Stage in hole, full circ @ 2500', 3000', bottom. Circ bottoms up, |
| 17:30 | 2.00 | 19:30 | 6 | TRIPS | Toh 1 std, spot 60 bbl, 60% lcm pill w/burlap. Toh. |
| 19:30 | 4.00 | 23:30 | 20 | DIRECTIONAL WORK | PU dir tools, new bit, stage in hole.<br>Bop drill new daylight crew. |
| 23:30 | 1.00 | 00:30 | 2 | DRILL ACTUAL | Drill 3422' - 3517'. Lost circ. |
| 00:30 | 1.00 | 01:30 | 5 | COND MUD & CIRC | C&C, build volume. |
| 01:30 | 4.50 | 06:00 | 2 | DRILL ACTUAL | Drill 3517' - 3739'. 25% returns. wob 15k, rpm 55/125, spp 1400 psi, dp 150 psi, rop 50 fph.<br>BOP drill morning tour. |

## 16-16D-46 BTR 7/2/2013 06:00 - 7/3/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 9.00 | 15:00 | 2 | DRILL ACTUAL | Steerable drlg 3739' - 4277'. 314 gpm, wob 15k, rpm 50/95, spp 1600 psi, dp 500 psi, rop 60 fph.<br>Drlg w/50% returns, lost completely @ 4200'. |
| 15:00 | 1.00 | 16:00 | 5 | COND MUD & CIRC | Circ BU. |
| 16:00 | 5.00 | 21:00 | 6 | TRIPS | Toh. Stop @ 2700, and 1900', spot 60 bbl 60% lcm pills, got circ on 2nd pill. Toh to 1400', close annular and squeeze into form(173 psi). Finish toh. |
| 21:00 | 2.00 | 23:00 | 20 | DIRECTIONAL WORK | PU BHA, LD reamers, clean out lcm in dir tools. |
| 23:00 | 2.50 | 01:30 | 5 | COND MUD & CIRC | Build volume, 35% lcm, clean flowline. |
| 01:30 | 3.50 | 05:00 | 6 | TRIPS | Stage in hole. |
| 05:00 | 0.50 | 05:30 | 2 | DRILL ACTUAL | Drill 4277' - 4353'. Gpm 320, wob 15k, rpm 45/96, spp 1550 psi, dp 400 psi, rop 152 fph. |
| 05:30 | 0.50 | 06:00 | 7 | LUBRICATE RIG | Rig service. |

## 16-16D-46 BTR 7/3/2013 06:00 - 7/4/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 4.50 | 10:30 | 2 | DRILL ACTUAL | Steerable drlg 4353' - 4733'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 84 fph. |
| 10:30 | 2.00 | 12:30 | 5 | COND MUD & CIRC | Build volume. |
| 12:30 | 6.50 | 19:00 | 2 | DRILL ACTUAL | Steerable drlg 4733' - 5110'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 58 fph. 50% returns. |
| 19:00 | 3.00 | 22:00 | 5 | COND MUD & CIRC | Build volume. |
| 22:00 | 2.00 | 00:00 | 2 | DRILL ACTUAL | Steerable drlg 5110' - 5300'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 95 fph. 30-50% returns. |
| 00:00 | 0.50 | 00:30 | 7 | LUBRICATE RIG | Rig service. |
| 00:30 | 4.00 | 04:30 | 5 | COND MUD & CIRC | C&C mud, build pills. |
| 04:30 | 1.50 | 06:00 | 6 | TRIPS | Toh to 3500', spot 60 bbl 60% lcm pill. |

## 16-16D-46 BTR 7/4/2013 06:00 - 7/5/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 4.00 | 10:00 | 6 | TRIPS | Toh to 3000', spot 80 bbl 60% lcm pill, toh to 2300', spot 80 bbl 60% lcm pill, toh to shoe. Build volume while pills soak, keep hole full over top. |
| 10:00 | 2.00 | 12:00 | 5 | COND MUD & CIRC | Close annular, squeeze pills into formation over span of 2 hrs(initial - 200 psi, 5 min - 235 psi, 10 min 260 psi, 30 min - 265 psi, 1 hr - 270 psi, 2 hr - 277 psi). |



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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 12:00 | 2.00 | 14:00 | 6 | TRIPS | Stage in hole. 50% returns. |
| 14:00 | 2.00 | 16:00 | 5 | COND MUD & CIRC | Pump sweep, C&C while building sweeps f/toh. 50% returns. |
| 16:00 | 5.00 | 21:00 | 6 | TRIPS | Toh. Spot 60 bbl 60% lcm pill @ 3000', 80 bbl 60% lcm pill @ 2400', 80 bbl 60% lcm pill @ 1800'. Stand mm & dir tools back. Clean & rinse dir tools. |
| 21:00 | 2.50 | 23:30 | 5 | COND MUD & CIRC | Build volume, lcm pills. |
| 23:30 | 6.50 | 06:00 | 6 | TRIPS | Tih to 3500', squeeze 150 bbl 55 vis, 60% lcm pill. Toh to 1800', squeeze 60 bbl Diaseal pill into formation. |

## 16-16D-46 BTR 7/5/2013 06:00 - 7/6/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 2.50 | 08:30 | 5 | COND MUD & CIRC | Squeeze Diaseal/walnut pill 30 bbls @ a time - hesitate1st - 45 psi; 13th - plateaued @ 117 psi. |
| 08:30 | 2.00 | 10:30 | 6 | TRIPS | Toh. |
| 10:30 | 8.50 | 19:00 | 21 | OPEN | Wait on pills to soak. |
| 19:00 | 4.00 | 23:00 | 6 | TRIPS | Tih open-ended. Shut down trip f/30 min for lightning storm. BU @ 3500'. |
| 23:00 | 4.50 | 03:30 | 5 | COND MUD & CIRC | C&C mud, raise mw to 9 ppg, 40 vis, 35% lcm. Lost returns, regain 50% returns. |
| 03:30 | 1.50 | 05:00 | 6 | TRIPS | Toh to 3500'. |
| 05:00 | 1.00 | 06:00 | 5 | COND MUD & CIRC | Build volume, lcm pills. |

## 16-16D-46 BTR 7/6/2013 06:00 - 7/7/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 5 | COND MUD & CIRC | Build & spot 160 bbl 60 vis 55% lcm pill. |
| 07:00 | 2.00 | 09:00 | 6 | TRIPS | Toh to 1400'. |
| 09:00 | 8.00 | 17:00 | 5 | COND MUD & CIRC | Build & squeeze 60 bbl Dia-Seal/walnut pill, 40 bbls 60% lcm pill w/diminishing results. |
| 17:00 | 1.50 | 18:30 | 6 | TRIPS | Toh. |
| 18:30 | 1.00 | 19:30 | 20 | DIRECTIONAL WORK | LD dir tools, mm. |
| 19:30 | 4.00 | 23:30 | 6 | TRIPS | PU bit, bit sub, tih. |
| 23:30 | 6.50 | 06:00 | 5 | COND MUD & CIRC | Clean out to bottom, C&C mud @ 20-30 strokes, lost 550 bbls. |

## 16-16D-46 BTR 7/7/2013 06:00 - 7/8/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 5 | COND MUD & CIRC | C&C mud. |
| 07:00 | 6.00 | 13:00 | 6 | TRIPS | LDDP. |
| 13:00 | 0.50 | 13:30 | 21 | OPEN | Pull wear bushing. |
| 13:30 | 8.00 | 21:30 | 12 | RUN CASING & CEMENT | HSM. RU Frank's Csg, run 7", 26#, P-110, LT&C csg as follows: Float shoe, 1 jt csg, float collar, 121 jts csg. Land @ 5288'. RD csrs. |
| 21:30 | 2.00 | 23:30 | 5 | COND MUD & CIRC | C&C mud. |
| 23:30 | 4.00 | 03:30 | 12 | RUN CASING & CEMENT | HSM. RU Halliburton, cmt well as follows: Press test 5200 psi. Pump 5 bbl H2O spacer, 40 bbl Superflush, 10 bbl H2O spacer. Mix & pump 90 sx(40 bbls) tuned light cmt @ 11 ppg, 2.32 yld, 10.61 gps H2O. Tail in with 625 sx(160 bbls) Econocem @ 13.5 ppg, 1.45 yld, 6.85 gps H2O. wash up on plug, drop top plug, displace w/200 bbls mud. Max press 1180 psi, bump plug to 1700 psi. Bled back 1.5 bbls, floats held. No returns throughout job. |
| 03:30 | 2.00 | 05:30 | 14 | NIPPLE UP B.O.P | ND & lift stack. Set slips w/150k(30 over), cut csg off, set weldolet. NU stack. |
| 05:30 | 0.50 | 06:00 | 14 | NIPPLE UP B.O.P | X/O pipe rams(install VBR's). |

## 16-16D-46 BTR 7/8/2013 06:00 - 7/9/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 14 | NIPPLE UP B.O.P | NUBOP. |
| 07:00 | 3.00 | 10:00 | 15 | TEST B.O.P | Test pipe rams, shell to 5000 psi high, 250 psi low. |



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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 10:00 | 1.50 | 11:30 | 21 | OPEN | Replace saver sub, gripper dies. |
| 11:30 | 2.00 | 13:30 | 21 | OPEN | Wait on Halliburton - Cement pod trlr in way - couldn't get 3 1/2" drill string on location. |
| 13:30 | 2.00 | 15:30 | 20 | DIRECTIONAL WORK | PU BHA, scribe mm. |
| 15:30 | 1.50 | 17:00 | 8 | REPAIR RIG | Replace skate chain on pipe wrangler. |
| 17:00 | 6.00 | 23:00 | 6 | TRIPS | PU HWDP & DP. |
| 23:00 | 1.00 | 00:00 | 21 | OPEN | Drill cmt & flt equip, 10' to 5310. |
| 00:00 | 6.00 | 06:00 | 2 | DRILL ACTUAL | Drill 5300' - 5530'. Wob 15k, rpm 50/70, spp 2100 psi, dp 150 psi, rop 38 fph. |

## 16-16D-46 BTR 7/9/2013 06:00 - 7/10/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 7.50 | 13:30 | 2 | DRILL ACTUAL | Steerable drlg 5530' - 5976'. Wob 15k, rpm 50/71, spp 2200 psi, dp 200 psi, rop 60 fph. |
| 13:30 | 0.50 | 14:00 | 7 | LUBRICATE RIG | Rig service. Check C.O.M. |
| 14:00 | 15.50 | 05:30 | 2 | DRILL ACTUAL | Steerable drlg 5976' - 6826'. Wob 15k, rpm 50/71, spp 2500 psi, dp 200 psi, rop 55 fph. |
| 05:30 | 0.50 | 06:00 | 7 | LUBRICATE RIG | Rig service. |

## 16-16D-46 BTR 7/10/2013 06:00 - 7/11/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 3.50 | 09:30 | 2 | DRILL ACTUAL | Steerable drlg 6826' - 7060'. TD well. Wob 17k, rpm 55/71, spp 2600 psi, dp 150 psi, rop 67 fph. |
| 09:30 | 1.00 | 10:30 | 5 | COND MUD & CIRC | Sweep hole, Circ clean. |
| 10:30 | 1.50 | 12:00 | 6 | TRIPS | ST to shoe, hole in good shape. |
| 12:00 | 1.00 | 13:00 | 5 | COND MUD & CIRC | Sweep hole, circ clean. Pump dry job. |
| 13:00 | 4.00 | 17:00 | 6 | TRIPS | Toh f/logs. |
| 17:00 | 5.00 | 22:00 | 11 | WIRELINE LOGS | HSM. RU loggers, run dual lateralog, spectral density, dual spaced neutron, gamma, sonic array, micro spherically focused log. RD loggers. |
| 22:00 | 3.00 | 01:00 | 6 | TRIPS | Tih w/bit. |
| 01:00 | 1.00 | 02:00 | 5 | COND MUD & CIRC | C&C f/csg. |
| 02:00 | 4.00 | 06:00 | 6 | TRIPS | Drop drift, toh. |

## 16-16D-46 BTR 7/11/2013 06:00 - 7/12/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 6 | TRIPS | Finish toh. |
| 07:00 | 7.00 | 14:00 | 12 | RUN CASING & CEMENT | HSM. RU casers, run 4 1/2" 11.6# P-110 LT&C liner as follows: flt shoe, 2 jts csg, flt collar, landing collar, 44 jts csg, liner hanger, 162 jts dp. |
| 14:00 | 3.00 | 17:00 | 5 | COND MUD & CIRC | PU cmt head, tag bottom @ 7060'. PU, C&C f/cmt. |
| 17:00 | 3.00 | 20:00 | 12 | RUN CASING & CEMENT | HSM. RU Halliburton and cement liner as follows: Press test to 9000 psi. Pump 40 bbls Tuned spacer @ 10.5 #, 6.24 yld, 43.06 gps H2O. Mix and pump 170 sx(44 bbls) Bondcem cmt @ 13.5#, 1.45 yld, 6.87 gps H2O. Shut down, wash to pit, drop DP dart. Pump 40 bbls H2O. Slowed rate @ 22 bbls into displacement to 2 bpm to pick up wiper plug. Pump 27 bbls drilling mud, max press 1807 psi, bump plug @ 2590 psi. Bled back 2 bbl, dropped ball. Pulled pipe into tension, rupture disk @ 1/2 bpm, increase rate to 3 bpm to seat ball, expand liner. Pull 60k over string wt to verify tool set, slack off 45k to release setting tool, pull out of liner. PBR @ 5064', LC @ 6971, FC @ 6972', FS @ 7059'. Circ 11 bbls cmt out w/mud, perform 3000#, 10 min press test. Displace/flush hole w/ .3 gal/Mgal H2O Clayweb & .15 gal/Mgal H2O Aldacide. RD Halliburton. |
| 20:00 | 5.00 | 01:00 | 6 | TRIPS | LD cmt head, LDDP. |
| 01:00 | 5.00 | 06:00 | 14 | NIPPLE UP B.O.P | Pull bit guide, remove rental pipe rams, NDBOP. Clean pits. Release rig @ 06:00. |

## 16-16D-46 BTR 7/16/2013 06:00 - 7/17/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

Bill Barrett Corporation

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 2.00 | 08:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. Construction Crew Working On Facilities. |
| 08:00 | 3.00 | 11:00 | IWHD | Install Wellhead | Safety Meeting With Cameron, Check Surface Casing & 5.5" For Pressure, 0 Psi On Both Sides.N/D 11" Night Cap, Cleaned And Dressed Up 5.5" Csg Top, Set And N/U 11" x 7 1/16" 10k Tbg. Head With 2 1/16' x 10k Gate Valves. Tested Hanger Seals To 7100 Psi, Good Test. Secured Well Head With 7" 10K Night Cap. |
| 11:00 | 19.00 | 06:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. Construction Crew Working On Facilities. |

## 16-16D-46 BTR 7/17/2013 06:00 - 7/18/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | WLWK | Wireline | MIRU SLB. CHECK PRESSURE. RIH W/ 3.5" OD GR/JB. UNABLE TO GET INTO LINER AT 5064'. POOH. RIH W/ 1-11/16" CBL/GR/TEMP/CCL LOG. THRU LT TO TAG AT 6893'. (DRLG REPORT SHOW TD AT 6972') HAVE 79' FILL. RUN REPEAT PASS 6893'-6600'. LOG SHOWS GOOD CMT FROM 6893' TO LINER TOP AT 5064'. GOOD/FAIR CMT FROM 5064' TO TOC AT 2735'. CBL RAN WITH PRESSURE. RIH W/ 3" OD JB AND WAS ABLE TO GET INTO LINER AND TAG AT 6893'. (HAVE DUMMY PLUGS COMING AND WILL RUN TO VERIFY PLUGS INTO LINER). RDMO SLB. |

## 16-16D-46 BTR 7/21/2013 06:00 - 7/22/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | GOP | General Operations | MIRU SLB. RIH W/ 4-1/2" EXELIS DUMMY PLUG. THRU 4-1/2" LT AT 5064' W/ NO PROBLEM. DOWN AND TAG AT 6893'. POOH. RDMO SLB. |

## 16-16D-46 BTR 7/29/2013 06:00 - 7/30/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | COMPLETION | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | GOP | General Operations | Set Frac Tree, Test Casing.<br>Plumb In FlowBack, Test. |



RECEIVED: Aug. 05, 2013

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:** 2OG0005608

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:** UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL** Oil Well

**8. WELL NAME and NUMBER:** 16-16D-46 BTR

**2. NAME OF OPERATOR:** BILL BARRETT CORP

**9. API NUMBER:** 43013509560000

**3. ADDRESS OF OPERATOR:** 1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:** 303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:** ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:** 1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:** Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:** DUCHESNE

**STATE:** UTAH

**11.** CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ☑ SUBSEQUENT REPORT<br>Date of Work Completion:<br>8/4/2013 | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☑ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

This well received first production on 08/04/2013.

**Accepted by the**
**Utah Division of**
**Oil, Gas and Mining**
**FOR RECORD ONLY**
September 05, 2013

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Venessa Langmacher | 303 312-8172 | Senior Permit Analyst |
| **SIGNATURE** N/A | | **DATE** 8/6/2013 |

RECEIVED: Aug. 06, 2013

API Well Number: 43013509560000

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

# WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. 2OG0005608

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator: BILL BARRETT CORP
Contact: CHRISTINA HIRTLER
E-Mail: chirtler@billbarrettcorp.com

8. Lease Name and Well No.: 16-16D-46 BTR

3. Address: 1099 18TH STREET SUITE 2300, DENVER, CO 80202

3a. Phone No. (include area code): Ph: 303-312-8597

9. API Well No.: 43-013-50956

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface: NESE 1676FSL 1303FEL

At top prod interval reported below: NESE 1128FSL 905FEL

At total depth: NESE 1083FSL 917FEL

10. Field and Pool, or Exploratory: ALTAMONT

11. Sec., T., R., M., or Block and Survey or Area: Sec 16 T4S R6W Mer UBM

12. County or Parish: UINTAH

13. State: UT

14. Date Spudded: 05/04/2013

15. Date T.D. Reached: 07/10/2013

16. Date Completed ☐ D & A ☒ Ready to Prod.: 08/04/2013

17. Elevations (DF, KB, RT, GL)*: 6565 GL

18. Total Depth: MD 7082 TVD 7011

19. Plug Back T.D.: MD 6973 TVD 6902

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CBL,CCL, MUD

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

| Hole Size | Size/Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sks. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|---|---|---|---|---|---|---|---|---|---|
| 26.000 | 16.000 COND | 65.0 | 0 | 80 | 80 | | | | |
| 8.750 | 7.000 J-55 | 26.0 | 0 | 5300 | 5288 | 715 | 200 | 0 | |
| 6.125 | 4.500 P110 | 11.6 | 0 | 7082 | 7059 | 170 | 44 | 2742 | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

24. Tubing Record

| Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|---|---|---|---|---|---|---|---|---|
| 2.875 | 5102 | | | | | | | |

25. Producing Intervals / 26. Perforation Record

| | Formation | Top | Bottom | Perforated Interval | Size | No. Holes | Perf. Status |
|---|---|---|---|---|---|---|---|
| A) | GREEN RIVER | 5197 | 5804 | 5197 TO 5804 | 0.380 | 93 | OPEN |
| B) | WASATCH | 5814 | 6865 | 5814 TO 6865 | 0.380 | 180 | OPEN |
| C) | | | | | | | |
| D) | | | | | | | |

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material |
|---|---|
| 5197 TO 5804 | GREEN RIVER SEE ATTACHED STAGES 4-6 |
| 5814 TO 6865 | WASATCH SEE ATTACHED STAGES 1-4 |
| | |
| | |

28. Production - Interval A

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| 08/04/2013 | 08/07/2013 | 24 | → | 405.0 | 205.0 | 1203.0 | 52.0 | | FLOWS FROM WELL |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| 26/64 | 480 | 825.0 | → | 405 | 205 | 1203 | 506 | POW |

28a. Production - Interval B

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

*(See Instructions and spaces for additional data on reverse side)*

**ELECTRONIC SUBMISSION #218795 VERIFIED BY THE BLM WELL INFORMATION SYSTEM**

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

RECEIVED: Sep. 03, 2013

28b. Production - Interval C

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

28c. Production - Interval D

| Date First Produced | Test Date | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | | |

| Choke Size | Tbg. Press. Flwg. SI | Csg. Press. | 24 Hr. Rate | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio | Well Status |
|---|---|---|---|---|---|---|---|---|
| | | | → | | | | | |

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

| Formation | Top | Bottom | Descriptions, Contents, etc. | Name | Top Meas. Depth |
|---|---|---|---|---|---|
| | | | | GREEN RIVER | 1619 |
| | | | | MAHOGANY | 2319 |
| | | | | DOUGLAS CREEK | 4298 |
| | | | | BLACK SHALE | 5112 |
| | | | | CASTLE PEAK | 5298 |
| | | | | UTELAND BUTTE | 5592 |
| | | | | WASATCH | 5814 |
| | | | | TD | 7082 |

32. Additional remarks (include plugging procedure):
TOC was calculated by CBL. Conductor cemented with grout. Attached is Treatment data, Logs(CBL will be mailed due to file size) and End of Well Report.First Gas sales were on 8/6/2013; first oil sales 8/9/2013.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

**Electronic Submission #218795 Verified by the BLM Well Information System.**
**For BILL BARRETT CORP, sent to the Vernal**

Name *(please print)* CHRISTINA HIRTLER Title ADMINISTRATIVE ASSISTANT

Signature (Electronic Submission) Date 09/03/2013

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

RECEIVED: Sep. 03, 2013

**16-16D-46 BTR Completion Report Continued***

| 44. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. (cont.) | | | | |
|---|---|---|---|---|
| AMOUNT AND TYPE OF MATERIAL | | | | |
| ***Stage*** | ***BBLS Slurry*** | ***lbs 100 Common Mesh*** | ***lbs 20/40 White Sand*** | ***gal 15% HCI Acid*** |
| 1 | 3205 | 120 | 149880 | 3914 |
| 2 | 3376 | | 160100 | 3863 |
| 3 | 3187 | 79 | 149291 | 3908 |
| 4 | 3192 | | 150000 | 3903 |
| 5 | 3368 | 14460 | 134840 | 3849 |
| 6 | 3140 | 13500 | 114400 | 3886 |

*Depth intervals for frac information same as perforation record intervals.

RECEIVED: Sep. 03, 2013

# SPERRY-SUN DRILLING SERVICES

## CERTIFIED SURVEY WORK SHEET

| | |
|---|---|
| OPERATOR: | Bill Barrett Corp |
| WELL: | 16-16D-46 BTR |
| FIELD: | Black Tail Ridge |
| RIG: | Nabors M-22 |
| LEGALS: | Sec. 16-T4S-R6W |
| COUNTY: | Duchesne |
| STATE: | Utah |
| CAL. METHOD: | Min. Curv. |
| MAG. DECL. APPLIED: | 11.35 |
| VERTICAL SEC. DIR. : | 150.730 |

| | |
|---|---|
| SSDS Job Number : | 900463703 |
| Start Date of Job : | 6/26/2013 |
| End Date of Job : | 7/10/2013 |
| Lead Directional Driller: | Glen Kumm |
| | Wesley Cline |
| Other SSDS DD's : | |
| | |
| SSDS MWD Engineers : | Eric Hirst |
| | |
| | |

Geo Pilot Engineer :

| | Main Hole ========= | | 1st Side Track ===== | | 2nd Side Track ==== | | 3rd Side Track ========> | |
|---|---|---|---|---|---|---|---|---|
| Surface Casing | 1426.00 | Tie-on | | Tie On | | Tie On | | Tie On |
| First Wireline Survey | | SS | | MWD | | | | |
| Last Wireline Survey | | SS | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| KOP Depth/Sidetrack MD | | KOP | | KOP-ST1 | | KOP-ST2 | | KOP-ST3 |
| MWD Tie-on | | | | | | | | |
| | | | | | | | | |
| First MWD Survey Depth | 153.00 | MWD | | MWD | | MWD | | MWD |
| Last MWD Survey Depth | 7014.00 | MWD | | MWD | | MWD | | MWD |
| Bit Extrapolation @ TD | 7060.00 | T.D. | | T.D. | | T.D. | | T.D. |

The following Sperry Drilling Services personnel, certify the above survey information to be accurate

| | | |
|---|---|---|
| Print Name: Glen Kumm | Print Name : Wesley Cline | Print Name : |
| Sign Name : | Sign Name : | Sign Name : |
| Print Name: Eric Hirst | Print Name : | Print Name : |
| Sign Name : | Sign Name : | Sign Name : |

TieOn — Tie On to Surface Casing (Assumed Vertical), Tie On to existing MWD Survey (prior drilled hole)

RECEIVED: Sep. 03, 2013

## Design Report for 16-16D-46 BTR - Sperry Final Surveys

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 153.00 | 0.69 | 70.500 | 153.00 | 0.31 | 0.87 | 0.16 | 0.45 |
| First Sperry MWD Survey @ 153.00' MD | | | | | | | |
| 247.00 | 0.74 | 67.790 | 246.99 | 0.73 | 1.96 | 0.33 | 0.06 |
| 340.00 | 1.05 | 153.410 | 339.98 | 0.19 | 2.90 | 1.25 | 1.33 |
| 433.00 | 2.60 | 166.840 | 432.93 | -2.63 | 3.76 | 4.13 | 1.72 |
| 525.00 | 3.25 | 183.960 | 524.81 | -7.26 | 4.06 | 8.32 | 1.18 |
| 615.00 | 3.29 | 192.500 | 614.67 | -12.33 | 3.32 | 12.38 | 0.54 |
| 707.00 | 2.43 | 206.710 | 706.55 | -16.65 | 1.87 | 15.44 | 1.20 |
| 800.00 | 1.83 | 208.720 | 799.49 | -19.71 | 0.28 | 17.33 | 0.65 |
| 895.00 | 1.34 | 213.360 | 894.45 | -21.97 | -1.06 | 18.64 | 0.53 |
| 990.00 | 0.85 | 204.950 | 989.43 | -23.53 | -1.97 | 19.56 | 0.54 |
| 1,085.00 | 1.15 | 173.900 | 1,084.42 | -25.12 | -2.17 | 20.85 | 0.64 |
| 1,180.00 | 1.63 | 165.610 | 1,179.39 | -27.38 | -1.73 | 23.04 | 0.55 |
| 1,275.00 | 1.71 | 162.540 | 1,274.35 | -30.04 | -0.97 | 25.73 | 0.13 |
| 1,369.00 | 2.39 | 161.580 | 1,368.29 | -33.24 | 0.07 | 29.03 | 0.72 |
| 1,465.00 | 3.34 | 167.420 | 1,464.17 | -37.86 | 1.31 | 33.67 | 1.03 |
| 1,560.00 | 4.05 | 130.760 | 1,558.98 | -42.76 | 4.46 | 39.48 | 2.55 |
| 1,655.00 | 4.16 | 135.390 | 1,653.74 | -47.40 | 9.42 | 45.95 | 0.37 |
| 1,749.00 | 6.31 | 137.900 | 1,747.34 | -53.66 | 15.27 | 54.28 | 2.30 |
| 1,844.00 | 8.23 | 132.800 | 1,841.58 | -62.15 | 23.76 | 65.84 | 2.13 |
| 1,939.00 | 9.90 | 130.330 | 1,935.39 | -72.06 | 34.98 | 79.96 | 1.80 |
| 2,034.00 | 11.24 | 127.310 | 2,028.77 | -82.96 | 48.57 | 96.11 | 1.53 |
| 2,129.00 | 12.31 | 129.900 | 2,121.77 | -95.07 | 63.70 | 114.07 | 1.26 |
| 2,224.00 | 13.08 | 135.450 | 2,214.45 | -109.22 | 79.02 | 133.91 | 1.52 |
| 2,319.00 | 14.82 | 135.470 | 2,306.65 | -125.55 | 95.08 | 156.00 | 1.83 |
| 2,414.00 | 14.37 | 136.280 | 2,398.58 | -142.73 | 111.75 | 179.14 | 0.52 |
| 2,509.00 | 12.67 | 136.810 | 2,490.95 | -158.85 | 127.03 | 200.67 | 1.79 |
| 2,604.00 | 13.94 | 133.610 | 2,583.40 | -174.34 | 142.44 | 221.72 | 1.54 |
| 2,699.00 | 16.41 | 133.220 | 2,675.08 | -191.42 | 160.51 | 245.46 | 2.60 |
| 2,794.00 | 16.00 | 133.400 | 2,766.30 | -209.61 | 179.80 | 270.75 | 0.43 |
| 2,889.00 | 15.70 | 133.610 | 2,857.69 | -227.47 | 198.62 | 295.53 | 0.32 |
| 2,984.00 | 15.22 | 134.110 | 2,949.25 | -245.01 | 216.88 | 319.77 | 0.52 |
| 3,079.00 | 14.71 | 133.090 | 3,041.03 | -261.93 | 234.64 | 343.21 | 0.60 |
| 3,174.00 | 13.83 | 133.360 | 3,133.10 | -277.97 | 251.71 | 365.54 | 0.93 |
| 3,267.00 | 13.24 | 133.530 | 3,223.51 | -292.93 | 267.51 | 386.32 | 0.64 |
| 3,362.00 | 12.58 | 135.080 | 3,316.11 | -307.75 | 282.70 | 406.68 | 0.78 |
| 3,457.00 | 11.34 | 133.590 | 3,409.05 | -321.52 | 296.77 | 425.56 | 1.35 |
| 3,552.00 | 10.70 | 135.310 | 3,502.30 | -334.23 | 309.74 | 442.99 | 0.76 |
| 3,647.00 | 10.97 | 137.970 | 3,595.60 | -347.21 | 322.00 | 460.31 | 0.60 |
| 3,742.00 | 11.36 | 141.340 | 3,688.81 | -361.23 | 333.89 | 478.36 | 0.80 |
| 3,837.00 | 11.24 | 143.820 | 3,781.97 | -376.01 | 345.20 | 496.78 | 0.53 |
| 3,932.00 | 11.38 | 148.190 | 3,875.12 | -391.45 | 355.61 | 515.33 | 0.91 |
| 4,027.00 | 11.83 | 155.940 | 3,968.19 | -408.31 | 364.52 | 534.39 | 1.71 |
| 4,122.00 | 10.96 | 156.960 | 4,061.31 | -425.51 | 372.02 | 553.07 | 0.94 |
| 4,217.00 | 10.57 | 161.520 | 4,154.64 | -442.09 | 378.32 | 570.61 | 0.99 |
| 4,303.00 | 10.29 | 162.540 | 4,239.22 | -456.89 | 383.13 | 585.87 | 0.39 |
| 4,398.00 | 9.94 | 161.670 | 4,332.75 | -472.77 | 388.25 | 602.23 | 0.40 |
| 4,493.00 | 9.57 | 162.160 | 4,426.37 | -488.07 | 393.25 | 618.02 | 0.40 |
| 4,588.00 | 8.26 | 166.150 | 4,520.22 | -502.22 | 397.30 | 632.34 | 1.52 |

## Design Report for 16-16D-46 BTR - Sperry Final Surveys

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---|---|---|---|---|---|---|---|
| 4,683.00 | 6.49 | 173.840 | 4,614.44 | -514.18 | 399.51 | 643.86 | 2.13 |
| 4,777.00 | 5.51 | 179.660 | 4,707.92 | -523.98 | 400.11 | 652.70 | 1.23 |
| 4,872.00 | 4.44 | 186.770 | 4,802.56 | -532.19 | 399.70 | 659.66 | 1.30 |
| 4,967.00 | 2.73 | 179.670 | 4,897.37 | -538.10 | 399.28 | 664.61 | 1.86 |
| 5,061.00 | 2.75 | 185.080 | 4,991.27 | -542.59 | 399.09 | 668.44 | 0.28 |
| 5,156.00 | 3.37 | 190.780 | 5,086.13 | -547.60 | 398.37 | 672.45 | 0.73 |
| 5,251.00 | 3.01 | 189.480 | 5,180.98 | -552.80 | 397.44 | 676.54 | 0.39 |
| 5,357.00 | 3.19 | 191.010 | 5,286.83 | -558.44 | 396.42 | 680.96 | 0.19 |
| 5,452.00 | 2.30 | 195.210 | 5,381.72 | -562.88 | 395.41 | 684.34 | 0.96 |
| 5,548.00 | 2.00 | 163.280 | 5,477.65 | -566.34 | 395.39 | 687.35 | 1.27 |
| 5,644.00 | 1.54 | 204.390 | 5,573.61 | -569.12 | 395.34 | 689.74 | 1.37 |
| 5,739.00 | 0.92 | 49.170 | 5,668.60 | -569.78 | 395.39 | 690.35 | 2.53 |
| 5,834.00 | 0.21 | 149.670 | 5,763.60 | -569.44 | 396.05 | 690.37 | 1.03 |
| 5,930.00 | 0.67 | 178.070 | 5,859.59 | -570.15 | 396.16 | 691.04 | 0.52 |
| 6,025.00 | 1.27 | 179.020 | 5,954.58 | -571.76 | 396.20 | 692.46 | 0.63 |
| 6,118.00 | 0.26 | 65.170 | 6,047.57 | -572.70 | 396.40 | 693.39 | 1.50 |
| 6,212.00 | 0.57 | 174.820 | 6,141.57 | -573.07 | 396.64 | 693.83 | 0.75 |
| 6,307.00 | 0.94 | 192.480 | 6,236.56 | -574.31 | 396.51 | 694.84 | 0.46 |
| 6,402.00 | 1.26 | 186.370 | 6,331.55 | -576.11 | 396.23 | 696.28 | 0.36 |
| 6,497.00 | 2.06 | 190.950 | 6,426.50 | -578.82 | 395.79 | 698.43 | 0.85 |
| 6,591.00 | 1.78 | 226.250 | 6,520.45 | -581.49 | 394.41 | 700.08 | 1.27 |
| 6,686.00 | 1.01 | 243.760 | 6,615.43 | -582.88 | 392.60 | 700.41 | 0.92 |
| 6,780.00 | 1.68 | 213.370 | 6,709.40 | -584.40 | 391.10 | 701.00 | 1.02 |
| 6,876.00 | 2.02 | 214.710 | 6,805.35 | -586.96 | 389.36 | 702.39 | 0.36 |
| 6,971.00 | 2.21 | 213.670 | 6,900.29 | -589.86 | 387.39 | 703.95 | 0.20 |
| 7,014.00 | 2.32 | 206.710 | 6,943.25 | -591.33 | 386.54 | 704.82 | 0.69 |
| **Last Sperry MWD Survey @ 7014.00' MD** | | | | | | | |
| 7,060.00 | 2.32 | 206.710 | 6,989.22 | -592.99 | 385.70 | 705.86 | 0.00 |
| **Straight Line Projection to TD @ 7060.00' MD** | | | | | | | |

### *Design Annotations*

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 153.00 | 153.00 | 0.31 | 0.87 | First Sperry MWD Survey @ 153.00' MD |
| 7,014.00 | 6,943.25 | -591.33 | 386.54 | Last Sperry MWD Survey @ 7014.00' MD |
| 7,060.00 | 6,989.22 | -592.99 | 385.70 | Straight Line Projection to TD @ 7060.00' MD |

### *Vertical Section Information*

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/_S (ft) | Origin +E/-W (ft) | Start TVD (ft) |
|---|---|---|---|---|---|---|
| Target | 16-16D-46 BTR_BHL Tgt | 150.733 | Slot | 0.00 | 0.00 | 0.00 |

### *Survey tool program*

| From (ft) | To (ft) | Survey/Plan | Survey Tool |
|---|---|---|---|
| 153.00 | 7,060.00 | Sperry MWD Surveys | MWD |



RECEIVED: Sep. 03, 2013

## Design Report for 16-16D-46 BTR - Sperry Final Surveys

### *Targets*

| Target Name<br>- hit/miss target<br>- Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 16-16D-46 BTR_ZONE | 0.00 | 0.00 | 4,578.00 | -611.27 | 342.56 | 655,351.39 | 2,262,502.72 | 40° 7' 43.810 N | 110° 33' 40.298 W |
| - actual wellpath misses target center by 115.47ft at 4657.77ft MD (4589.38 TVD, -511.25 N, 399.13 E)<br>- Rectangle (sides W200.00 H200.00 D2,404.00) | | | | | | | | | |
| 16-16D-46 BTR_VERT | 0.00 | 0.00 | 5,131.00 | -611.27 | 342.56 | 655,351.39 | 2,262,502.72 | 40° 7' 43.810 N | 110° 33' 40.298 W |
| - actual wellpath misses target center by 82.37ft at 5204.84ft MD (5134.89 TVD, -550.35 N, 397.86 E)<br>- Point | | | | | | | | | |
| 16-16D-46 BTR_SHL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 655,958.98 | 2,262,153.80 | 40° 7' 49.850 N | 110° 33' 44.708 W |
| - actual wellpath hits target center<br>- Point | | | | | | | | | |
| 16-16D-46 BTR_BHL | 0.00 | 0.00 | 6,982.00 | -611.27 | 342.56 | 655,351.39 | 2,262,502.72 | 40° 7' 43.810 N | 110° 33' 40.298 W |
| - actual wellpath misses target center by 47.05ft at 7054.24ft MD (6983.46 TVD, -592.79 N, 385.81 E)<br>- Point | | | | | | | | | |



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Duchesne County, UT (NAD 1927)

## North Reference Sheet for Sec. 16-T4S-R6W - 16-16D-46 BTR - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB 22`` @ 6587.00ft (Nabors M22). Northing and Easting are relative to 16-16D-46 BTR

Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 111° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 39' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991209

Grid Coordinates of Well: 655,958.98 ft N, 2,262,153.80 ft E

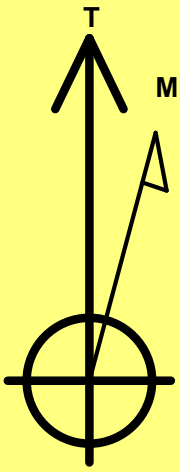
Geographical Coordinates of Well: 40° 07' 49.85" N, 110° 33' 44.71" W

Grid Convergence at Surface is: 0.60°

Based upon Minimum Curvature type calculations, at a Measured Depth of 7,060.00ft

the Bottom Hole Displacement is 707.40ft in the Direction of 146.96° (True).

Magnetic Convergence at surface is: -10.75° (26 June 2013, , BGGM2013)




| | |
|---|---|
| Magnetic Model: | BGGM2013 |
| Date: | 26-Jun-13 |
| Declination: | 11.35° |
| Inclination/Dip: | 65.70° |
| Field Strength: | 51955 |

Grid North is 0.60° East of True North (Grid Convergence)
Magnetic North is 11.35° East of True North (Magnetic Declination)
Magnetic North is 10.75° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.60°
To convert a Magnetic Direction to a True Direction, Add 11.35° East
To convert a Magnetic Direction to a Grid Direction, Add 10.75°



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Project: Duchesne County, UT (NAD 1927)
Site: Sec. 16-T4S-R6W
Well: 16-16D-46 BTR

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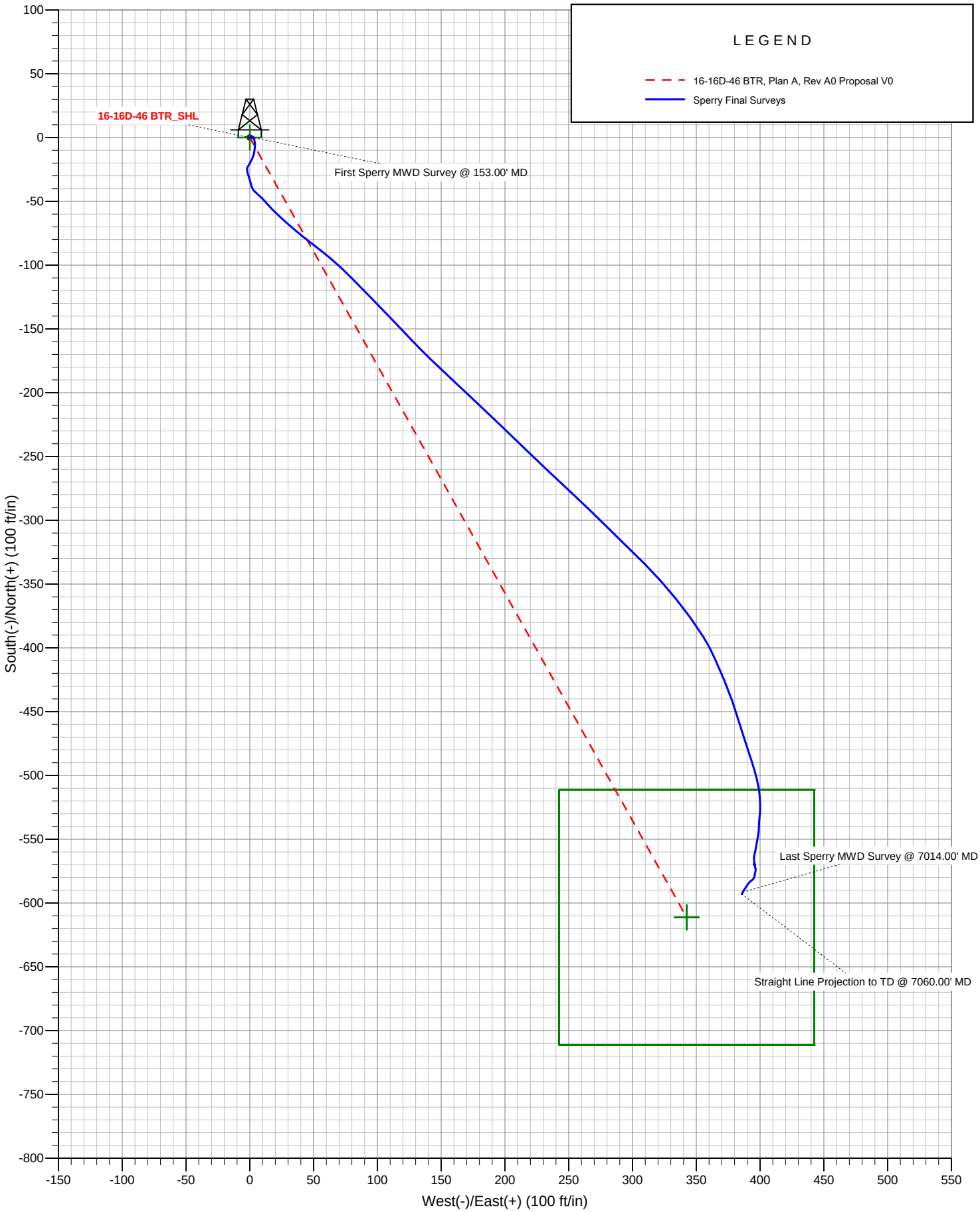
Sperry Drilling

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API Well Number: 43013509560000

Project: Duchesne County, UT (NAD 1927)
Site: Sec. 16-T4S-R6W
Well: 16-16D-46 BTR

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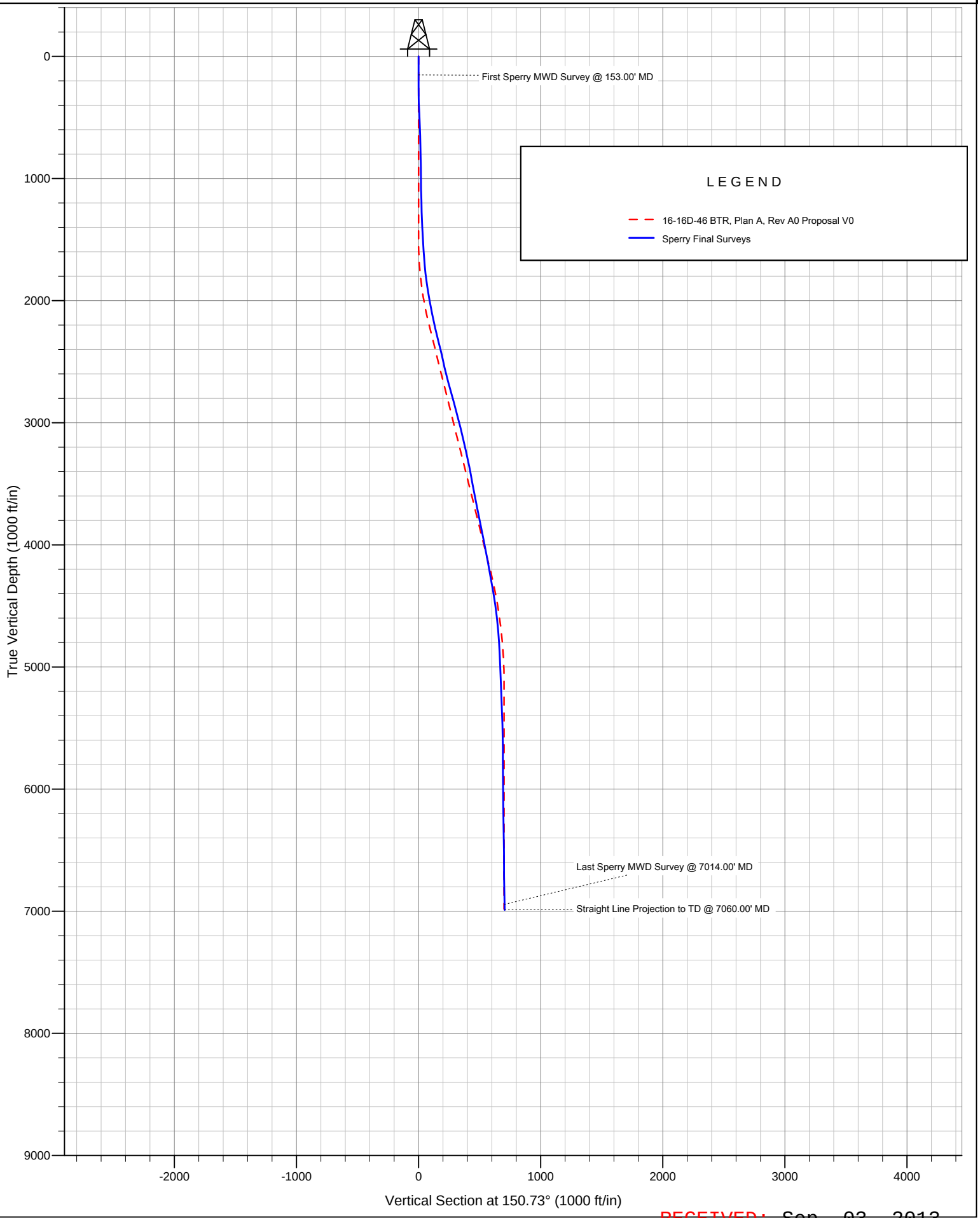
HALLIBURTON
Sperry Drilling

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## 16-16D-46 BTR 6/24/2013 06:00 - 6/25/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 13.00 | 19:00 | 1 | RIGUP & TEARDOWN | HSM - 1 mile rig move. RDRT w/4 trucks, forklifts, moved tubulars, catwalk, BOP wrangler, blooie line, pits, mud products. Scoped derrick in, squatted sub, laid derrick over. |
| 19:00 | 11.00 | 06:00 | 1 | RIGUP & TEARDOWN | Wait on daylight. |

## 16-16D-46 BTR 6/25/2013 06:00 - 6/26/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 13.00 | 19:00 | 1 | RIGUP & TEARDOWN | HSM - Rig move. MIRU 10 trucks, 2 cranes, 3 forklifts. Rig 100% moved, 75% rigged up. Move camps this a.m. |
| 19:00 | 11.00 | 06:00 | 1 | RIGUP & TEARDOWN | Wait on daylight. |

## 16-16D-46 BTR 6/26/2013 06:00 - 6/27/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 21.00 | 03:00 | 1 | RIGUP & TEARDOWN | HSM - Rigging up. Move camps. RURT. Trucks released @ noon. Scope derrick, r/u mud line, kelly hose, flare lines, dress out shakers, test pumps, r/u floor, top drive, n/u diverter(as per Nabors), r/u flowline. |

## 16-16D-46 BTR 6/27/2013 06:00 - 6/28/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 9.00 | 15:00 | 8 | REPAIR RIG | Wait on mechanic until 11:30, repair rig. |
| 15:00 | 1.00 | 16:00 | 21 | OPEN | Rack & strap BHA. Rig on daywork @ 15:00 hrs. |
| 16:00 | 2.50 | 18:30 | 20 | DIRECTIONAL WORK | PU dir tools, bit, mm. |
| 18:30 | 1.00 | 19:30 | 2 | DRILL ACTUAL | Drill 102' - 177'. rpm 30/82, spp 450 psi, dp 275 psi, rop 75 fph.<br>Spud well @ 18:30. |
| 19:30 | 1.00 | 20:30 | 20 | DIRECTIONAL WORK | PU index sub, antenna sub, install mwd. PU 8" NMDC & reamer. |
| 20:30 | 3.50 | 00:00 | 2 | DRILL ACTUAL | Drill 177' - 596'. Rpm 55/168, spp 1250 psi, dp 450 psi, rop 119 fph. |
| 00:00 | 2.00 | 02:00 | 6 | TRIPS | Pull 5 stds HWDP, PU 9 6" DC's. |
| 02:00 | 4.00 | 06:00 | 2 | DRILL ACTUAL | Drill 596' - 1396'. Rpm 55/168, spp 1250 psi, dp 400 psi, rop 200 fph. |

## 16-16D-46 BTR 6/28/2013 06:00 - 6/29/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.50 | 06:30 | 2 | DRILL ACTUAL | Drill 1396' - 1440'. Wob 15k, rpm 55/173, spp 1500 psi, dp 350 psi, rop 88 fph. |
| 06:30 | 5.00 | 11:30 | 21 | OPEN | C&C f/ST, Got hung up @ 1411'. Work tight hole. Won't rotate or circulate. |
| 11:30 | 1.00 | 12:30 | 21 | OPEN | PU surface jars and 15' pup, jarred string free. LD SJ. |
| 12:30 | 1.00 | 13:30 | 5 | COND MUD & CIRC | Rot & reciprocate, pump lcm sweeps, full returns. C&C f/ST. |
| 13:30 | 2.00 | 15:30 | 6 | TRIPS | ST to DC's. Hole in good shape. |
| 15:30 | 1.00 | 16:30 | 5 | COND MUD & CIRC | C&C & sweep hole f/toh. |
| 16:30 | 3.50 | 20:00 | 6 | TRIPS | Toh. LD 8" tools, dir tools. |
| 20:00 | 4.00 | 00:00 | 12 | RUN CASING & CEMENT | HSM. RU casers and run 9 5/8", 36#, j-55, STC csg as follows: guide shoe, 1 jt csg, float collar, 32 jts csg. Shoe @ 1426'. |
| 00:00 | 2.00 | 02:00 | 5 | COND MUD & CIRC | C&C f/cmt. HSM, RU cementers. |
| 02:00 | 3.00 | 05:00 | 12 | RUN CASING & CEMENT | Cement well as follows: Press test to 3000 psi. Pump 20 bbl H2O spacer, 40 bbls super flush @ 10 ppg, 20 bbl H2O spacer. Mix & pump 160 sx(90 bbls) lead cmt @ 11 ppg, 3.16 yld, 19.48 gps H2O, tail in with 240 sx(57bbls) @ 14.6 ppg, 1.33 yld, 6.31 gps H2O. Shutdown, wash pumps and lines, drop top plug. Diplace cmt w/108 bbls mud @ 8.8 ppg. Max press 280 psi, final press 210 psi. Bumped plug to 800 psi, bled back 3/4 bbl, floats held. Lost circ halfway through displacement, no cmt to surface. |



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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 05:00 | 1.00 | 06:00 | 12 | RUN CASING & CEMENT | Run 120' 1" pipe, prepare for 100 sk top job. |

## 16-16D-46 BTR 6/29/2013 06:00 - 6/30/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 12 | RUN CASING & CEMENT | Top out w/ 100 sx G cmt @ 15.6 ppg, 1.17 yld, 5 gps H2O w/2% cacl. Cmt stayed in riser. |
| 07:00 | 2.50 | 09:30 | 13 | WAIT ON CEMENT | W.O.C. Prep stack f/removal. |
| 09:30 | 4.00 | 13:30 | 21 | OPEN | ND annular, riser, lift up & cut off csg. Lay out cutoff & annular. Weld on 11" by 9 5/8" 5k SOW csg head. |
| 13:30 | 1.50 | 15:00 | 14 | NIPPLE UP B.O.P | NUBOP. |
| 15:00 | 4.00 | 19:00 | 15 | TEST B.O.P | HSM. Rig up tester, test upper & lower kelly, safety, dart, inside valves; pipe rams, hcr, kill line valves; choke line, check valve, gage and manifold valves, blind ram & super choke to 5000 psi high and 250 psi low f/10 min. Test hydrill to 2500 psi high and 250 psi low f/10 min. Test surf csg to 1500 psi f/30 min. RD tester.<br>Notified regulatory of csg & cmt, BOP test 6-26-13 @ 20:00. |
| 19:00 | 0.50 | 19:30 | 21 | OPEN | Install wear bushing. |
| 19:30 | 4.00 | 23:30 | 6 | TRIPS | PU dir tools, bit, scribe mm, tih. Tag cmt @ 1380'. |
| 23:30 | 2.00 | 01:30 | 21 | OPEN | Drill cmt & flt equip, 20' new hole to 1460'. |
| 01:30 | 0.50 | 02:00 | 21 | OPEN | Perform F.I.T to 136 psi f/10.5 EMW. |
| 02:00 | 4.00 | 06:00 | 2 | DRILL ACTUAL | Steerable drlg 1460' - 2664'. Wob 20k, rpm 55/189, spp 2250 psi, dp 450 psi, rop 301 fph.<br>BOP drill morning tour. |

## 16-16D-46 BTR 6/30/2013 06:00 - 7/1/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.50 | 06:30 | 2 | DRILL ACTUAL | Steerable drlg 2664' - 2795'. Lost circ. |
| 06:30 | 1.00 | 07:30 | 5 | COND MUD & CIRC | C&C, pump lcm sweeps, build volume. |
| 07:30 | 0.50 | 08:00 | 2 | DRILL ACTUAL | Drill 2795' - 2854'. Lost circ. |
| 08:00 | 0.50 | 08:30 | 5 | COND MUD & CIRC | C&C, pump lcm sweeps, build volume. |
| 08:30 | 2.00 | 10:30 | 2 | DRILL ACTUAL | Drill 2854' - 3044'. 320 gpm, wob 20k, rpm 50/ 96, spp 1100 psi, dp 250 psi, rop 95 fph. No returns. |
| 10:30 | 1.00 | 11:30 | 5 | COND MUD & CIRC | C&C, pump lcm sweeps, build volume. |
| 11:30 | 1.00 | 12:30 | 2 | DRILL ACTUAL | Drill 3044' - 3139'. 320 gpm, wob 20k, rpm 50/ 96, spp 1100 psi, dp 250 psi, rop 100 fph. No returns. |
| 12:30 | 0.50 | 13:00 | 5 | COND MUD & CIRC | Spot 80 bbl 60% lcm pill. |
| 13:00 | 1.50 | 14:30 | 6 | TRIPS | Toh to shoe. |
| 14:30 | 4.00 | 18:30 | 5 | COND MUD & CIRC | Build and pump 80 bbl, 60% lcm pill. Wait on lcm pills. |
| 18:30 | 2.50 | 21:00 | 6 | TRIPS | Stage in hole, try to circ every 500', no circ. |
| 21:00 | 1.50 | 22:30 | 2 | DRILL ACTUAL | Drill 3139' - 3233'. No returns. |
| 22:30 | 1.50 | 00:00 | 5 | COND MUD & CIRC | C&C, pump lcm sweeps, build volume. |
| 00:00 | 1.50 | 01:30 | 2 | DRILL ACTUAL | Drill 3233' - 3422'. No returns. |
| 01:30 | 0.50 | 02:00 | 5 | COND MUD & CIRC | Pump 100 bbl 60% lcm pill. |
| 02:00 | 2.00 | 04:00 | 6 | TRIPS | Toh to 2000', spot another pill, toh. Stand back dir tools. |
| 04:00 | 2.00 | 06:00 | 6 | TRIPS | Tih to shoe, wait on pills. |

## 16-16D-46 BTR 7/1/2013 06:00 - 7/2/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 21 | OPEN | Wait on pills, try to circ no circ. |
| 07:00 | 4.50 | 11:30 | 6 | TRIPS | Tih to 2000', spot 60 bbl 60% lcm pill, cut up and pump burlap bags, spot 60 bbl 60% lcmpill. Got 60-70% returns while pumping 2nd pill. C&C and build volume. Still losing, pump burlap and 60 bbl 60% lcm pill. |
| 11:30 | 3.00 | 14:30 | 6 | TRIPS | Toh to shoe, squeeze pill into formation. Built to 45 psi (10 bbls pumped), hesitated 5 min, try again, same. Wait 1 hr, try again, same. |

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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 14:30 | 3.00 | 17:30 | 6 | TRIPS | Stage in hole, full circ @ 2500', 3000', bottom. Circ bottoms up, |
| 17:30 | 2.00 | 19:30 | 6 | TRIPS | Toh 1 std, spot 60 bbl, 60% lcm pill w/burlap. Toh. |
| 19:30 | 4.00 | 23:30 | 20 | DIRECTIONAL WORK | PU dir tools, new bit, stage in hole.<br>Bop drill new daylight crew. |
| 23:30 | 1.00 | 00:30 | 2 | DRILL ACTUAL | Drill 3422' - 3517'. Lost circ. |
| 00:30 | 1.00 | 01:30 | 5 | COND MUD & CIRC | C&C, build volume. |
| 01:30 | 4.50 | 06:00 | 2 | DRILL ACTUAL | Drill 3517' - 3739'. 25% returns. wob 15k, rpm 55/125, spp 1400 psi, dp 150 psi, rop 50 fph.<br>BOP drill morning tour. |

## 16-16D-46 BTR 7/2/2013 06:00 - 7/3/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 9.00 | 15:00 | 2 | DRILL ACTUAL | Steerable drlg 3739' - 4277'. 314 gpm, wob 15k, rpm 50/95, spp 1600 psi, dp 500 psi, rop 60 fph.<br>Drlg w/50% returns, lost completely @ 4200'. |
| 15:00 | 1.00 | 16:00 | 5 | COND MUD & CIRC | Circ BU. |
| 16:00 | 5.00 | 21:00 | 6 | TRIPS | Toh. Stop @ 2700, and 1900', spot 60 bbl 60% lcm pills, got circ on 2nd pill. Toh to 1400', close annular and squeeze into form(173 psi). Finish toh. |
| 21:00 | 2.00 | 23:00 | 20 | DIRECTIONAL WORK | PU BHA, LD reamers, clean out lcm in dir tools. |
| 23:00 | 2.50 | 01:30 | 5 | COND MUD & CIRC | Build volume, 35% lcm, clean flowline. |
| 01:30 | 3.50 | 05:00 | 6 | TRIPS | Stage in hole. |
| 05:00 | 0.50 | 05:30 | 2 | DRILL ACTUAL | Drill 4277' - 4353'. Gpm 320, wob 15k, rpm 45/96, spp 1550 psi, dp 400 psi, rop 152 fph. |
| 05:30 | 0.50 | 06:00 | 7 | LUBRICATE RIG | Rig service. |

## 16-16D-46 BTR 7/3/2013 06:00 - 7/4/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 4.50 | 10:30 | 2 | DRILL ACTUAL | Steerable drlg 4353' - 4733'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 84 fph. |
| 10:30 | 2.00 | 12:30 | 5 | COND MUD & CIRC | Build volume. |
| 12:30 | 6.50 | 19:00 | 2 | DRILL ACTUAL | Steerable drlg 4733' - 5110'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 58 fph. 50% returns. |
| 19:00 | 3.00 | 22:00 | 5 | COND MUD & CIRC | Build volume. |
| 22:00 | 2.00 | 00:00 | 2 | DRILL ACTUAL | Steerable drlg 5110' - 5300'. Gpm 320, wob 15-20k, rpm 50/96, spp 1500 psi, dp 400 psi, rop 95 fph. 30-50% returns. |
| 00:00 | 0.50 | 00:30 | 7 | LUBRICATE RIG | Rig service. |
| 00:30 | 4.00 | 04:30 | 5 | COND MUD & CIRC | C&C mud, build pills. |
| 04:30 | 1.50 | 06:00 | 6 | TRIPS | Toh to 3500', spot 60 bbl 60% lcm pill. |

## 16-16D-46 BTR 7/4/2013 06:00 - 7/5/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 4.00 | 10:00 | 6 | TRIPS | Toh to 3000', spot 80 bbl 60% lcm pill, toh to 2300', spot 80 bbl 60% lcm pill, toh to shoe. Build volume while pills soak, keep hole full over top. |
| 10:00 | 2.00 | 12:00 | 5 | COND MUD & CIRC | Close annular, squeeze pills into formation over span of 2 hrs(initial - 200 psi, 5 min - 235 psi, 10 min 260 psi, 30 min - 265 psi, 1 hr - 270 psi, 2 hr - 277 psi). |
| 12:00 | 2.00 | 14:00 | 6 | TRIPS | Stage in hole. 50% returns. |
| 14:00 | 2.00 | 16:00 | 5 | COND MUD & CIRC | Pump sweep, C&C while building sweeps f/toh. 50% returns. |
| 16:00 | 5.00 | 21:00 | 6 | TRIPS | Toh. Spot 60 bbl 60% lcm pill @ 3000', 80 bbl 60% lcm pill @ 2400', 80 bbl 60% lcm pill @ 1800'. Stand mm & dir tools back. Clean & rinse dir tools. |
| 21:00 | 2.50 | 23:30 | 5 | COND MUD & CIRC | Build volume, lcm pills. |
| 23:30 | 6.50 | 06:00 | 6 | TRIPS | Tih to 3500', squeeze 150 bbl 55 vis, 60% lcm pill. Toh to 1800', squeeze 60 bbl Diaseal pill into formation. |



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## 16-16D-46 BTR 7/5/2013 06:00 - 7/6/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 2.50 | 08:30 | 5 | COND MUD & CIRC | Squeeze Diaseal/walnut pill 30 bbls @ a time - hesitate1st - 45 psi; 13th - plateaued @ 117 psi. |
| 08:30 | 2.00 | 10:30 | 6 | TRIPS | Toh. |
| 10:30 | 8.50 | 19:00 | 21 | OPEN | Wait on pills to soak. |
| 19:00 | 4.00 | 23:00 | 6 | TRIPS | Tih open-ended. Shut down trip f/30 min for lightning storm. BU @ 3500'. |
| 23:00 | 4.50 | 03:30 | 5 | COND MUD & CIRC | C&C mud, raise mw to 9 ppg, 40 vis, 35% lcm. Lost returns, regain 50% returns. |
| 03:30 | 1.50 | 05:00 | 6 | TRIPS | Toh to 3500'. |
| 05:00 | 1.00 | 06:00 | 5 | COND MUD & CIRC | Build volume, lcm pills. |

## 16-16D-46 BTR 7/6/2013 06:00 - 7/7/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 5 | COND MUD & CIRC | Build & spot 160 bbl 60 vis 55% lcm pill. |
| 07:00 | 2.00 | 09:00 | 6 | TRIPS | Toh to 1400'. |
| 09:00 | 8.00 | 17:00 | 5 | COND MUD & CIRC | Build & squeeze 60 bbl Dia-Seal/walnut pill, 40 bbls 60% lcm pill w/diminishing results. |
| 17:00 | 1.50 | 18:30 | 6 | TRIPS | Toh. |
| 18:30 | 1.00 | 19:30 | 20 | DIRECTIONAL WORK | LD dir tools, mm. |
| 19:30 | 4.00 | 23:30 | 6 | TRIPS | PU bit, bit sub, tih. |
| 23:30 | 6.50 | 06:00 | 5 | COND MUD & CIRC | Clean out to bottom, C&C mud @ 20-30 strokes, lost 550 bbls. |

## 16-16D-46 BTR 7/7/2013 06:00 - 7/8/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 5 | COND MUD & CIRC | C&C mud. |
| 07:00 | 6.00 | 13:00 | 6 | TRIPS | LDDP. |
| 13:00 | 0.50 | 13:30 | 21 | OPEN | Pull wear bushing. |
| 13:30 | 8.00 | 21:30 | 12 | RUN CASING & CEMENT | HSM. RU Frank's Csg, run 7", 26#, P-110, LT&C csg as follows: Float shoe, 1 jt csg, float collar, 121 jts csg. Land @ 5288'. RD csrs. |
| 21:30 | 2.00 | 23:30 | 5 | COND MUD & CIRC | C&C mud. |
| 23:30 | 4.00 | 03:30 | 12 | RUN CASING & CEMENT | HSM. RU Halliburton, cmt well as follows: Press test 5200 psi. Pump 5 bbl H2O spacer, 40 bbl Superflush, 10 bbl H2O spacer. Mix & pump 90 sx(40 bbls) tuned light cmt @ 11 ppg, 2.32 yld, 10.61 gps H2O. Tail in with 625 sx(160 bbls) Econocem @ 13.5 ppg, 1.45 yld, 6.85 gps H2O. wash up on plug, drop top plug, displace w/200 bbls mud. Max press 1180 psi, bump plug to 1700 psi. Bled back 1.5 bbls, floats held. No returns throughout job. |
| 03:30 | 2.00 | 05:30 | 14 | NIPPLE UP B.O.P | ND & lift stack. Set slips w/150k(30 over), cut csg off, set weldolet. NU stack. |
| 05:30 | 0.50 | 06:00 | 14 | NIPPLE UP B.O.P | X/O pipe rams(install VBR's). |

## 16-16D-46 BTR 7/8/2013 06:00 - 7/9/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 14 | NIPPLE UP B.O.P | NUBOP. |
| 07:00 | 3.00 | 10:00 | 15 | TEST B.O.P | Test pipe rams, shell to 5000 psi high, 250 psi low. |
| 10:00 | 1.50 | 11:30 | 21 | OPEN | Replace saver sub, gripper dies. |
| 11:30 | 2.00 | 13:30 | 21 | OPEN | Wait on Halliburton - Cement pod trlr in way - couldn't get 3 1/2" drill string on location. |
| 13:30 | 2.00 | 15:30 | 20 | DIRECTIONAL WORK | PU BHA, scribe mm. |
| 15:30 | 1.50 | 17:00 | 8 | REPAIR RIG | Replace skate chain on pipe wrangler. |
| 17:00 | 6.00 | 23:00 | 6 | TRIPS | PU HWDP & DP. |
| 23:00 | 1.00 | 00:00 | 21 | OPEN | Drill cmt & flt equip, 10' to 5310. |
| 00:00 | 6.00 | 06:00 | 2 | DRILL ACTUAL | Drill 5300' - 5530'. Wob 15k, rpm 50/70, spp 2100 psi, dp 150 psi, rop 38 fph. |



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## 16-16D-46 BTR 7/9/2013 06:00 - 7/10/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 7.50 | 13:30 | 2 | DRILL ACTUAL | Steerable drlg 5530' - 5976'. Wob 15k, rpm 50/71, spp 2200 psi, dp 200 psi, rop 60 fph. |
| 13:30 | 0.50 | 14:00 | 7 | LUBRICATE RIG | Rig service. Check C.O.M. |
| 14:00 | 15.50 | 05:30 | 2 | DRILL ACTUAL | Steerable drlg 5976' - 6826'. Wob 15k, rpm 50/71, spp 2500 psi, dp 200 psi, rop 55 fph. |
| 05:30 | 0.50 | 06:00 | 7 | LUBRICATE RIG | Rig service. |

## 16-16D-46 BTR 7/10/2013 06:00 - 7/11/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 3.50 | 09:30 | 2 | DRILL ACTUAL | Steerable drlg 6826' - 7060'. TD well. Wob 17k, rpm 55/71, spp 2600 psi, dp 150 psi, rop 67 fph. |
| 09:30 | 1.00 | 10:30 | 5 | COND MUD & CIRC | Sweep hole, Circ clean. |
| 10:30 | 1.50 | 12:00 | 6 | TRIPS | ST to shoe, hole in good shape. |
| 12:00 | 1.00 | 13:00 | 5 | COND MUD & CIRC | Sweep hole, circ clean. Pump dry job. |
| 13:00 | 4.00 | 17:00 | 6 | TRIPS | Toh f/logs. |
| 17:00 | 5.00 | 22:00 | 11 | WIRELINE LOGS | HSM. RU loggers, run dual lateralog, spectral density, dual spaced neutron, gamma, sonic array, micro spherically focused log. RD loggers. |
| 22:00 | 3.00 | 01:00 | 6 | TRIPS | Tih w/bit. |
| 01:00 | 1.00 | 02:00 | 5 | COND MUD & CIRC | C&C f/csg. |
| 02:00 | 4.00 | 06:00 | 6 | TRIPS | Drop drift, toh. |

## 16-16D-46 BTR 7/11/2013 06:00 - 7/12/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | 6 | TRIPS | Finish toh. |
| 07:00 | 7.00 | 14:00 | 12 | RUN CASING & CEMENT | HSM. RU casers, run 4 1/2" 11.6# P-110 LT&C liner as follows: flt shoe, 2 jts csg, flt collar, landing collar, 44 jts csg, liner hanger, 162 jts dp. |
| 14:00 | 3.00 | 17:00 | 5 | COND MUD & CIRC | PU cmt head, tag bottom @ 7060'. PU, C&C f/cmt. |
| 17:00 | 3.00 | 20:00 | 12 | RUN CASING & CEMENT | HSM. RU Halliburton and cement liner as follows: Press test to 9000 psi. Pump 40 bbls Tuned spacer @ 10.5 #, 6.24 yld, 43.06 gps H2O. Mix and pump 170 sx(44 bbls) Bondcem cmt @ 13.5#, 1.45 yld, 6.87 gps H2O. Shut down, wash to pit, drop DP dart. Pump 40 bbls H2O. Slowed rate @ 22 bbls into displacement to 2 bpm to pick up wiper plug. Pump 27 bbls drilling mud, max press 1807 psi, bump plug @ 2590 psi. Bled back 2 bbl, dropped ball. Pulled pipe into tension, rupture disk @ 1/2 bpm, increase rate to 3 bpm to seat ball, expand liner. Pull 60k over string wt to verify tool set, slack off 45k to release setting tool, pull out of liner. PBR @ 5064', LC @ 6971, FC @ 6972', FS @ 7059'. Circ 11 bbls cmt out w/mud, perform 3000#, 10 min press test. Displace/flush hole w/ .3 gal/Mgal H2O Clayweb & .15 gal/Mgal H2O Aldacide. RD Halliburton. |
| 20:00 | 5.00 | 01:00 | 6 | TRIPS | LD cmt head, LDDP. |
| 01:00 | 5.00 | 06:00 | 14 | NIPPLE UP B.O.P | Pull bit guide, remove rental pipe rams, NDBOP. Clean pits. Release rig @ 06:00. |

## 16-16D-46 BTR 7/16/2013 06:00 - 7/17/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 2.00 | 08:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. Construction Crew Working On Facilities. |
| 08:00 | 3.00 | 11:00 | IWHD | Install Wellhead | Safety Meeting With Cameron, Check Surface Casing & 5.5" For Pressure, 0 Psi On Both Sides.N/D 11" Night Cap, Cleaned And Dressed Up 5.5" Csg Top, Set And N/U 11" x 7 1/16" 10k Tbg. Head With 2 1/16' x 10k Gate Valves. Tested Hanger Seals To 7100 Psi, Good Test. Secured Well Head With 7" 10K Night Cap. |
| 11:00 | 19.00 | 06:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. Construction Crew Working On Facilities. |

## 16-16D-46 BTR 7/17/2013 06:00 - 7/18/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | WLWK | Wireline | MIRU SLB. CHECK PRESSURE. RIH W/ 3.5" OD GR/JB. UNABLE TO GET INTO LINER AT 5064'. POOH. RIH W/ 1-11/16" CBL/GR/TEMP/CCL LOG. THRU LT TO TAG AT 6893'. (DRLG REPORT SHOW TD AT 6972') HAVE 79' FILL. RUN REPEAT PASS 6893'-6600'. LOG SHOWS GOOD CMT FROM 6893' TO LINER TOP AT 5064'. GOOD/FAIR CMT FROM 5064' TO TOC AT 2735'. CBL RAN WITH PRESSURE. RIH W/ 3" OD JB AND WAS ABLE TO GET INTO LINER AND TAG AT 6893'. (HAVE DUMMY PLUGS COMING AND WILL RUN TO VERIFY PLUGS INTO LINER). RDMO SLB. |

## 16-16D-46 BTR 7/21/2013 06:00 - 7/22/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | GOP | General Operations | MIRU SLB. RIH W/ 4-1/2" EXELIS DUMMY PLUG. THRU 4-1/2" LT AT 5064' W/ NO PROBLEM. DOWN AND TAG AT 6893'. POOH. RDMO SLB. |

## 16-16D-46 BTR 7/29/2013 06:00 - 7/30/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | GOP | General Operations | Set Frac Tree, Test Casing.<br>Plumb In FlowBack, Test. |

## 16-16D-46 BTR 7/30/2013 06:00 - 7/31/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 24.00 | 06:00 | GOP | General Operations | Heat KCL Tanks.<br>HES Set Mover And Manifold.<br>Prep For Frac. |

## 16-16D-46 BTR 7/31/2013 06:00 - 8/1/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 2.00 | 08:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. 0 Psi. On Well. |
| 08:00 | 1.50 | 09:30 | SRIG | Rig Up/Down | SLB WireLine Arrive On Location, Hold Safety Meeting. Rig Up Equipment, Arm Gun, Rig Up To Well. |
| 09:30 | 1.00 | 10:30 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013. Found And Correlated To Liner Top.<br>Drop Down, Perforate Stage 1 CR-5/CR-4A/CR-4 Zone, 6,633 - 6,865'. 51 Holes.<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 10:30 | 4.50 | 15:00 | SRIG | Rig Up/Down | RigDown WireLine And Frac Crews, MOL. |
| 15:00 | 15.00 | 06:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. SDFD. |

## 16-16D-46 BTR 8/1/2013 06:00 - 8/2/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.00 | 06:00 | LOCL | Lock Wellhead & Secure | HES Crew On Location At 0400 Hrs., Prime Chemical And Fluid Pumps, Pressure Test To 9000 Psi., Ran QC On Fluid, Looks Good. |
| 06:00 | 0.00 | 06:00 | SMTG | Safety Meeting | Safety Meeting. Talk About Smoking Area, PPE, Escape And Mustering Areas, Communication, And Red Zone. |

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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.00 | 06:00 | FRAC | Frac. Job | Frac Stage 1. Fluid System: Hybor G 16<br>Open Well, 75 Psi. ICP. BrokeDown At 9.4 Bpm And 3,264 Psi..<br>Pump 3900 Gals. 15% HCL And 102 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 74.5 Bpm And 3,252 Psi., Get ISIP, 1,732 Psi.. 0.69 Psi./Ft. F.G.. 51/51 Holes.<br>Con't With SlickWater Pad, 48,010 Gals..<br>Stage Into Hybor Pad, 76.0 Bpm At 3,071 Psi..<br>On Perfs, 76.1 Bpm At 3,328 Psi., 12,208 Gals.<br>Stage Into 2.0# 20/40 White Prop, 76.0 Bpm At 3,427 Psi..<br>On Perfs, 75.7 Bpm At 3,248 Psi., 8,182 Gals.<br>Stage Into 3.0# 20/40 White Prop, 75.7 Bpm At 3,317 Psi..<br>On Perfs, 75.8 Bpm At 2,633 Psi., 28,625 Gals.<br>Stage Into 3.5# 20/40 White Prop, 75.9 Bpm At 2,503 Psi..<br>On Perfs, 75.9 Bpm At 2,409 Psi., 9,840 Gals.<br>Stage Into 4.0# 20/40 White Prop, 75.8 Bpm At 2,412 Psi..<br>On Perfs, 75.8 Bpm At 2,347 Psi., 10,469 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,732 Psi.. 0.69 Psi./Ft. F.G.. WSI And Secured.<br>Total 20/40 White Prop - 150,000#<br>Total Clean - 136,382 Gals.. 3,247 Bbls..<br>Produced Water - 61,607 Gals..<br>2% KCL - 69,316 Gals..<br>BWTR - 3,344 Bbls.<br>Max. Rate - 77.0 Bpm<br>Avg. Rate - 75.9 Bpm<br>Max. Psi. - 3,478 Psi.<br>Avg. Psi. - 2,669 Psi. |
| 06:00 | 0.17 | 06:10 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up Gun String And CBP Plug Assembly. Equalize To Well Pressure. |
| 06:10 | 1.00 | 07:10 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 6,604'. 1,600 Psi..<br>Perforate Stage 2 CR-4/CR-3 Zone, 6,314 - 6,584'. 45 Holes. 1,600 Psi..<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 07:10 | 0.17 | 07:20 | GOP | General Operations | Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. |
| 07:20 | 1.17 | 08:30 | FRAC | Frac. Job | Frac Stage 2. Fluid System: Hybor G 16<br>Open Well, 1,555 Psi. ICP. BrokeDown At 9.6 Bpm And 2,258 Psi..<br>Pump 3900 Gals. 15% HCL And 90 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 74.7 Bpm And 3,576 Psi., Get ISIP, 1,657 Psi.. 0.70 Psi./Ft. F.G.. 45/45 Holes.<br>Con't With SlickWater Pad, 51,527 Gals..<br>Stage Into Hybor Pad, 75.3 Bpm At 2,987 Psi..<br>On Perfs, 75.3 Bpm At 3,218 Psi., 13,028 Gals.<br>Stage Into 2.0# 20/40 White Prop, 75.3 Bpm At 3,246 Psi..<br>On Perfs, 74.9 Bpm At 2,980 Psi., 7,329 Gals.<br>Stage Into 3.0# 20/40 White Prop, 74.9 Bpm At 3,084 Psi..<br>On Perfs, 74.9 Bpm At 2,631 Psi., 29,330 Gals.<br>Stage Into 3.5# 20/40 White Prop, 75.0 Bpm At 2,460 Psi..<br>On Perfs, 75.0 Bpm At 2,395 Psi., 9,200 Gals.<br>Stage Into 4.0# 20/40 White Prop, 74.9 Bpm At 2,386 Psi..<br>On Perfs, 74.2 Bpm At 2,318 Psi., 8,400 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,902 Psi.. 0.73 Psi./Ft. F.G.. WSI And Secured.<br>Total 20/40 White Prop - 160,100#<br>Total Clean - 142,196 Gals.. 3,386 Bbls..<br>Produced Water - 73,071 Gals..<br>2% KCL - 67,287 Gals..<br>BWTR - 3,344 Bbls.<br>Max. Rate - 76.8 Bpm<br>Avg. Rate - 74.8 Bpm<br>Max. Psi. - 3,216 Psi.<br>Avg. Psi. - 2,567 Psi. |
| 08:30 | 0.17 | 08:40 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up Gun String And CBP Plug Assembly. Equalize To Well Pressure. |



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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 08:40 | 0.91 | 09:35 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 6,309'. 1,700 Psi..<br>Perforate Stage 3 CR-3/CR-2 Zone, 6,043 - 6,289'. 42 Holes. 1,500 Psi..<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 09:35 | 0.08 | 09:40 | GOP | General Operations | Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. |
| 09:40 | 1.08 | 10:45 | FRAC | Frac. Job | Frac Stage 3. Fluid System: Hybor G 16<br>Open Well, 1,500 Psi. ICP. BrokeDown At 4.6 Bpm And 1,913 Psi..<br>Pump 3900 Gals. 15% HCL And 90 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 76.1 Bpm And 3,476 Psi., Get ISIP, 1,615 Psi.. 0.70 Psi./Ft. F.G.. 34/45 Holes.<br>Con't With SlickWater Pad, 48,422 Gals..<br>Stage Into Hybor Pad, 75.8 Bpm At 3,105 Psi..<br>On Perfs, 75.9 Bpm At 3,274 Psi., 12,201 Gals.<br>Stage Into 2.0# 20/40 White Prop, 76.0 Bpm At 3,269 Psi..<br>On Perfs, 75.7 Bpm At 2,981 Psi., 7,003 Gals.<br>Stage Into 3.0# 20/40 White Prop, 75.7 Bpm At 3,147 Psi..<br>On Perfs, 75.8 Bpm At 2,643 Psi., 26,916 Gals.<br>Stage Into 3.5# 20/40 White Prop, 75.9 Bpm At 2,465 Psi..<br>On Perfs, 75.8 Bpm At 2,399 Psi., 7,943 Gals.<br>Stage Into 4.0# 20/40 White Prop, 75.8 Bpm At 2,408 Psi..<br>On Perfs, 76.4 Bpm At 2,377 Psi., 8,489 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,836 Psi.. 0.74 Psi./Ft. F.G.. WSI And Secured.<br>Total 20/40 White Prop - 149,900#<br>Total Clean - 133,909 Gals.. 3,188 Bbls..<br>Produced Water - 69,369 Gals..<br>2% KCL - 62,582 Gals..<br>BWTR - 3,333 Bbls.<br>Max. Rate - 77.0 Bpm<br>Avg. Rate - 75.8 Bpm<br>Max. Psi. - 3,230 Psi.<br>Avg. Psi. - 2,575 Psi. |
| 10:45 | 0.08 | 10:49 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up Gun String And CBP Plug Assembly. Equalize To Well Pressure. |
| 10:49 | 0.92 | 11:45 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 6,038'. 1,600 Psi..<br>Perforate Stage 4 CR-2/Wasatch Zone, 5,803 - 6,019'. 45 Holes. 1,500 Psi..<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 11:45 | 0.17 | 11:55 | GOP | General Operations | Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. |



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**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 11:55 | 1.00 | 12:55 | FRAC | Frac. Job | Frac Stage 4. Fluid System: Hybor G 16<br>Open Well, 1,338 Psi. ICP. BrokeDown At 9.5 Bpm And 2,015 Psi..<br>Pump 3900 Gals. 15% HCL And 90 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 76.2 Bpm And 3,515 Psi., Get ISIP, 1,495 Psi.. 0.69 Psi./Ft. F.G.. 35/45 Holes.<br>Con't With SlickWater Pad, 48,378 Gals..<br>Stage Into Hybor Pad, 75.7 Bpm At 2,904 Psi..<br>On Perfs, 75.7 Bpm At 2,951 Psi., 12,250 Gals.<br>Stage Into 2.0# 20/40 White Prop, 75.7 Bpm At 2,938 Psi..<br>On Perfs, 75.7 Bpm At 2,616 Psi., 6,745 Gals.<br>Stage Into 3.0# 20/40 White Prop, 75.5 Bpm At 2,730 Psi..<br>On Perfs, 75.8 Bpm At 2,643 Psi., 27,718 Gals.<br>Stage Into 3.5# 20/40 White Prop, 75.6 Bpm At 2,030 Psi..<br>On Perfs, 75.5 Bpm At 2,001 Psi., 7,690 Gals.<br>Stage Into 4.0# 20/40 White Prop, 75.5 Bpm At 2,003 Psi..<br>On Perfs, 75.1 Bpm At 1,945 Psi., 8,630 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,610 Psi.. 0.71 Psi./Ft. F.G.. WSI And Secured.<br>Total 20/40 White Prop - 150,000#<br>Total Clean - 134,134 Gals.. 3,194 Bbls..<br>Produced Water - 69,150 Gals..<br>2% KCL - 63,033 Gals..<br>BWTR - 3,341 Bbls.<br>Max. Rate - 76.5 Bpm<br>Avg. Rate - 75.6 Bpm<br>Max. Psi. - 3,001 Psi.<br>Avg. Psi. - 2,444 Psi. |
| 12:55 | 0.17 | 13:05 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up Gun String And CBP Plug Assembly. Equalize To Well Pressure. |
| 13:05 | 0.92 | 14:00 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 5,795'. 1,450 Psi..<br>Perforate Stage 5 CR-1/UteLand Butte/Castle Peak Zone, 5,535 - 5,775'. 45 Holes.<br>1,450 Psi..<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 14:00 | 16.00 | 06:00 | LOCL | Lock Wellhead & Secure | WSI And Secured. SDFD. |

## 16-16D-46 BTR 8/2/2013 06:00 - 8/3/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.00 | 06:00 | LOCL | Lock Wellhead & Secure | HES Crew On Location At 0400 Hrs., Prime Chemical And Fluid Pumps, Pressure Test To 9000 Psi., Ran QC On Fluid, Looks Good. |
| 06:00 | 0.00 | 06:00 | SMTG | Safety Meeting | Safety Meeting. Talk About Smoking Area, PPE, Escape And Mustering Areas, Communication, And Red Zone. |



RECEIVED: Sep. 03, 2013

Bill Barrett Corporation

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 0.00 | 06:00 | FRAC | Frac. Job | Frac Stage 5. Fluid System: Hybor G 16<br>Open Well, 1,231 Psi. ICP. BrokeDown At 9.5 Bpm And 1,562 Psi..<br>Pump 3900 Gals. 15% HCL And 90 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 74.1 Bpm And 2,868 Psi., Get ISIP, 1,404 Psi.. 0.69 Psi./Ft. F.G.. 45/45 Holes.<br>Con't With SlickWater Pad, 51,617 Gals..<br>Stage Into .75# 100 Mesh Pad, 74.6 Bpm At 2,481 Psi..<br>On Perfs, 74.3 Bpm At 2,400 Psi., 19,253 Gals.<br>Stage Into 1.0# 20/40 White Prop, 74.3 Bpm At 2,405 Psi..<br>On Perfs, 74.1 Bpm At 2,253 Psi., 6,453 Gals.<br>Stage Into 2.0# 20/40 White Prop, 74.2 Bpm At 2,313 Psi..<br>On Perfs, 74.1 Bpm At 2,048 Psi., 6,450 Gals.<br>Stage Into 3.0# 20/40 White Prop, 74.1 Bpm At 2,119 Psi..<br>On Perfs, 74.2 Bpm At 1,938 Psi., 29,739 Gals.<br>Stage Into 3.5# 20/40 White Prop, 74.2 Bpm At 1,865 Psi..<br>On Perfs, 74.2 Bpm At 1,821 Psi., 7,484 Gals.<br>Stage Into 4.0# 20/40 White Prop, 74.1 Bpm At 1,830 Psi..<br>On Perfs, 73.2 Bpm At 1,671 Psi., 7,450 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,446 Psi.. 0.70 Psi./Ft. F.G.. WSI And Secured.<br>100 Mesh - 14,460#<br>Total 20/40 White Prop - 159,740#<br>Total Clean - 150,751 Gals.. 3,589 Bbls..<br>Produced Water - 71,989 Gals..<br>2% KCL - 76,829 Gals..<br>BWTR - 3,766 Bbls.<br>Max. Rate - 76.6 Bpm<br>Avg. Rate - 74.1 Bpm<br>Max. Psi. - 2,583 Psi.<br>Avg. Psi. - 2,164 Psi. |
| 06:00 | 0.09 | 06:05 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up Gun String And CBP Plug Assembly. Equalize To Well Pressure. |
| 06:05 | 0.92 | 07:00 | PFRT | Perforating | RIH With 3 1/8" PJ Omega 3104 Perf. Gun Configured At 120 Degree Phasing, 3 Spf, .36" Penetration Charges, 23 Gms., .44 Dia. Holes.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 5,530'. 1,250 Psi..<br>Perforate Stage 3 CR-3/CR-2 Zone, 6,043 - 6,289'. 42 Holes. 1,150 Psi..<br>POOH, LD Guns, Verify All Shots Fired. WSI And Secured. |
| 07:00 | 0.17 | 07:10 | GOP | General Operations | Well Turned Over To HES. Pressure Test To 8500#. Equalize, Open To Well. |
| 07:10 | 1.16 | 08:20 | FRAC | Frac. Job | Frac Stage 6. Fluid System: Hybor G 16<br>Open Well, 1,115 Psi. ICP. BrokeDown At 9.8 Bpm And 1,618 Psi..<br>Pump 3900 Gals. 15% HCL And 90 Bio Balls, Attempt BallOut. Let Balls Fall.<br>Get Stabilized Injection Of 69.8 Bpm And 2,421 Psi., Get ISIP, 1,171 Psi.. 0.67 Psi./Ft. F.G.. 37/45 Holes.<br>Con't With SlickWater Pad, 48,377 Gals..<br>Stage Into .75# 100 Mesh Pad, 70.3 Bpm At 2,059 Psi..<br>On Perfs, 70.2 Bpm At 1,965 Psi., 18,044 Gals.<br>Stage Into 1.0# 20/40 White Prop, 70.2 Bpm At 1,967 Psi..<br>On Perfs, 70.0 Bpm At 1,862 Psi., 6,228 Gals.<br>Stage Into 2.0# 20/40 White Prop, 70.2 Bpm At 1,904 Psi..<br>On Perfs, 69.9 Bpm At 1,669 Psi., 6,108 Gals.<br>Stage Into 3.0# 20/40 White Prop, 70.0 Bpm At 1,740 Psi..<br>On Perfs, 70.0 Bpm At 1,518 Psi., 27,412 Gals.<br>Stage Into 3.5# 20/40 White Prop, 70.0 Bpm At 1,513 Psi..<br>On Perfs, 70.0 Bpm At 1,463 Psi., 7,125 Gals.<br>Stage Into 4.0# 20/40 White Prop, 70.0 Bpm At 1,476 Psi..<br>On Perfs, 70.1 Bpm At 1,565 Psi., 6,032 Gals.<br>Stage Into Flush, Flush 15 Bbls. Over Bottom Perf..<br>Get ISDP, 1,333 Psi.. 0.69 Psi./Ft. F.G.. WSI And Secured.<br>100 Mesh - 17,648#<br>Total 20/40 White Prop - 151,350#<br>Total Clean - 141,132 Gals.. 3,360 Bbls..<br>Produced Water - 68,238 Gals..<br>2% KCL - 70,949 Gals..<br>BWTR - 3,515 Bbls.<br>Max. Rate - 70.4 Bpm<br>Avg. Rate - 70.0 Bpm<br>Max. Psi. - 2,145 Psi.<br>Avg. Psi. - 1,801 Psi. |



RECEIVED: Sep. 03, 2013

Bill Barrett Corporation

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 08:20 | | 08:20 | CTUW | W/L Operation | Well Turned Over To WireLine. Pick Up CBP Plug Assembly. Equalize To Well Pressure. |
| 08:20 | | 08:20 | PFRT | Perforating | RIH With 3 1/8" CCL, Sinker Bar And CBP Plug Assembly.<br>Correlating To HES SD/DSN Dated 7-10-2013 And SLB CBL/CCL Dated 7-17-2013.<br>Found And Correlated To Liner Top.<br>Drop Down, Set CBP At 5,150'. 1,200 Psi..<br>Bleed Pressure Off Well.<br>POOH, LD Tools. WSI And Secured. |
| 08:20 | | 08:20 | SRIG | Rig Up/Down | RigDown WireLine And Frac Crews, MOL. |
| 08:20 | | 08:20 | LOCL | Lock Wellhead & Secure | WSI And Secured. SDFD. |

## 16-16D-46 BTR 8/3/2013 06:00 - 8/4/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | CTRL | Crew Travel | CREW TRAVEL. |
| 07:00 | 0.50 | 07:30 | SMTG | Safety Meeting | HSM. REPAIR FLAT TIRE ON RIG. ROAD RIG TO LOCATION. |
| 07:30 | 2.00 | 09:30 | SRIG | Rig Up/Down | SPOT AND RUSU. ND FRAC VALVES. NU 7" 5K X 7" 10K SPOOL, 7" 5K BOP, AND 7" 5K HYDRIL. RU FLOOR. |
| 09:30 | 2.00 | 11:30 | GOP | General Operations | SPOT HYD WALK AND RACKS. UNLOAD 167-JTS 2-7/8" L-80 TBG AND 70-JTS 2-3/8" L-80 TBG. |
| 11:30 | 4.50 | 16:00 | RUTB | Run Tubing | MU 3-7/8" BIT, POBS, 1-JT, AND 1.87" XN. RIH W/ 65-JTS 2-3/8" L-80 TBG, X-OVER, AND 98-JTS 2-7/8" L-80 TBG. THRU LT AT 5064'. TAG KILL PLUG AT 5150'. |
| 16:00 | 1.00 | 17:00 | PTST | Pressure Test | RU PWR SWIVEL. FILL TBG. PRES TEST TO 2500 PSI. |
| 17:00 | 2.00 | 19:00 | DOPG | Drill Out Plugs | EST CIRC. D/O PLUGS.<br><br>CBP #1 AT 5150'. 0' SAND. D/O IN 15 MIN. FCP 900 ON 32/64". PMP 2, RET 4.<br>CBP #2 AT 5530'. 18' SAND. D/O IN 30 MIN. FCP 900 ON 32/64". PMP 2 RET 4.<br>CIRC CLEAN. PMP 4 BPM. RET 6 BPM. 900 PSI ON 38/64". |
| 19:00 | 0.50 | 19:30 | RUTB | Run Tubing | HANG PWR SWIVEL. PULL ABOVE LINER TOP. EOT AT 4992'. 93 JTS 2-7/8" IN. TURN OVER TO FBC AND PRODUCTION FOR NIGHT. |
| 19:30 | 10.50 | 06:00 | FBCK | Flowback Well | CREW TRAVEL. WELL FLOW TO PRODUCTION OVER NIGHT. |

## 16-16D-46 BTR 8/4/2013 06:00 - 8/5/2013 06:00

| API/UWI | State/Province | County | Field Name | Well Status | Total Depth (ftKB) | Primary Job Type |
|---|---|---|---|---|---|---|
| 43-013-50956 | Utah | Duchesne | Black Tail Ridge | PRODUCING | 7,060.0 | Drilling & Completion |

**Time Log**

| Start Time | Dur (hr) | End Time | Code | Category | Com |
|---|---|---|---|---|---|
| 06:00 | 1.00 | 07:00 | CTRL | Crew Travel | CREW TRAVEL. HSM. |
| 07:00 | 1.00 | 08:00 | RUTB | Run Tubing | WELL FLOWED 700 BBLS IN 10 HRS. 900 PSI ON 20/64" CHOKE. OPEN RAMS. RUN BACK IN W/ 3-7/8" BIT, THRU 4-1/2" LT AT 5064' TO TAG CBP #3. OPEN WELL TO FBT. RU PWR SWIVEL. |
| 08:00 | 5.00 | 13:00 | DOPG | Drill Out Plugs | EST CIRC AND D/O PLUGS<br><br>CBP #3 AT 5795'. C/O 22' SAND. D/O IN 10 MIN. FCP 800 PSI ON 32/64".<br>CBP #4 AT 6038'. C/O 20' SAND. D/O IN 13 MIN. FCP 800 PSI ON 32/64".<br>CBP #5 AT 6309'. C/O 20' SAND. D/O IN 15 MIN. FCP 800 PSI ON 32/64".<br>CBP #6 AT 6604'. C/O 19' SAND. D/O IN 12 MIN. FCP 800 PSI ON 32/64".<br>C/O 112' SAND TO FC AT 6972' (107' RATHOLE) W/ 156-JTS 2-7/8" AND 65-JTS 2-3/8" IN.<br><br>CIRC CLEAN. RD PWR SWIVEL. |
| 13:00 | 1.00 | 14:00 | PULT | Pull Tubing | RD PWR SWIVEL. POOH AS LD 60-JTS 2-7/8" TBG. |
| 14:00 | 3.50 | 17:30 | GOP | General Operations | PU 7" 5K HANGER. LUBE IN AND LAND. LOST SEAL. PULL HANGER. HAD TO PULL AND RELAND 5 TIMES TO GET SEAL. BLED OFF ABOVE HANGER. GOOD. RD FLOOR. ND BOP. NU WH. POBS AT 3600 PSI. TURN OVER TO FBC AND SALES. |
| 17:30 | 1.00 | 18:30 | SRIG | Rig Up/Down | RDSU. RACK OUT PUMP AND EQUIP. WELL TURNED TO FBC AND SALES. SICP 1000, FTP 900 ON 20/64". |
| 18:30 | 11.50 | 06:00 | FBCK | Flowback Well | CREW TRAVEL. WELL FLOWING |



RECEIVED: Sep. 03, 2013

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

**FORM 9**

**5.LEASE DESIGNATION AND SERIAL NUMBER:**
14 20 H62 6518

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**
UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Oil Well

**8. WELL NAME and NUMBER:**
16-16D-46 BTR

**2. NAME OF OPERATOR:**
BILL BARRETT CORP

**9. API NUMBER:**
43013509560000

**3. ADDRESS OF OPERATOR:**
1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:**
303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:**
ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:**
DUCHESNE

**STATE:**
UTAH

**11.**
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☐ NOTICE OF INTENT<br>Approximate date work will start: | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| ✓ SUBSEQUENT REPORT<br>Date of Work Completion:<br>6/13/2013 | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ DRILLING REPORT<br>Report Date: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| | ☐ WATER SHUTOFF | ☐ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ✓ OTHER | OTHER: lease |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

The tribal lease has been earned for this well. The new lease number is 14 20 H62 6518.

**Accepted by the**
**Utah Division of**
**Oil, Gas and Mining**
**FOR RECORD ONLY**
April 15, 2015

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Brady Riley | 303 312-8115 | Permit Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 4/1/2015 |

RECEIVED: Apr. 01, 2015

**FEDERAL APPROVAL OF THIS ACTION IS NECESSARY**

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

**5.LEASE DESIGNATION AND SERIAL NUMBER:**
14 20 H62 6518

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

**6. IF INDIAN, ALLOTTEE OR TRIBE NAME:**
UTE

**7.UNIT or CA AGREEMENT NAME:**

**1. TYPE OF WELL**
Oil Well

**8. WELL NAME and NUMBER:**
16-16D-46 BTR

**2. NAME OF OPERATOR:**
BILL BARRETT CORP

**9. API NUMBER:**
43013509560000

**3. ADDRESS OF OPERATOR:**
1099 18th Street Ste 2300 , Denver, CO, 80202

**PHONE NUMBER:**
303 312-8134 Ext

**9. FIELD and POOL or WILDCAT:**
ALTAMONT

**4. LOCATION OF WELL**
**FOOTAGES AT SURFACE:**
1676 FSL 1303 FEL
**QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:**
Qtr/Qtr: NESE Section: 16 Township: 04.0S Range: 06.0W Meridian: U

**COUNTY:**
DUCHESNE

**STATE:**
UTAH

**11.**
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ✓ NOTICE OF INTENT<br>Approximate date work will start:<br>4/23/2017 | ☐ ACIDIZE | ☐ ALTER CASING | ☐ CASING REPAIR |
| | ☐ CHANGE TO PREVIOUS PLANS | ☐ CHANGE TUBING | ☐ CHANGE WELL NAME |
| | ☐ CHANGE WELL STATUS | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ CONVERT WELL TYPE |
| ☐ SUBSEQUENT REPORT<br>Date of Work Completion: | ☐ DEEPEN | ☐ FRACTURE TREAT | ☐ NEW CONSTRUCTION |
| | ☐ OPERATOR CHANGE | ☐ PLUG AND ABANDON | ☐ PLUG BACK |
| | ☐ PRODUCTION START OR RESUME | ☐ RECLAMATION OF WELL SITE | ☐ RECOMPLETE DIFFERENT FORMATION |
| ☐ SPUD REPORT<br>Date of Spud: | ☐ REPERFORATE CURRENT FORMATION | ☐ SIDETRACK TO REPAIR WELL | ☐ TEMPORARY ABANDON |
| | ☐ TUBING REPAIR | ☐ VENT OR FLARE | ☐ WATER DISPOSAL |
| ☐ DRILLING REPORT<br>Report Date: | ☐ WATER SHUTOFF | ✓ SI TA STATUS EXTENSION | ☐ APD EXTENSION |
| | ☐ WILDCAT WELL DETERMINATION | ☐ OTHER | OTHER: |

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**

This well was SI on 4/23/15 due to a failed rod pump. Due to low commodity prices & high failure rates the well has been left SI. On 4/22/16 the well will be SI for 1 year. Current economics doesn't justify the workover required to RTP. For this reason BBC is requesting an addt'l year SI, before a MIT is required, until 4/22/17. The well currently has 0 psi tbg, 10 psi csg, 0 psi Braden Head. With minimal to 0 Braden Head pressure & 10 psi csg pressure, it is evident that the 7" int. csg has full integrity & all formations are protected. Fluid level was found at 3,800 ft. from sfc with TOC at 2,740 ft. The well is SI at the wellhead & all sfc equipment has been drained & winterized. The well is still on an active lease operator route & is checked frequently for any surface/potential downhole issues. It would be RTP if economics will justify at a higher commodity price before 4/22/17

**Accepted by the Utah Division of Oil, Gas and Mining**

**Date:** March 29, 2016

**By:** Dark K Quist

| NAME (PLEASE PRINT) | PHONE NUMBER | TITLE |
|---|---|---|
| Brady Riley | 303 312-8115 | Permit Analyst |
| **SIGNATURE** | | **DATE** |
| N/A | | 3/16/2016 |

RECEIVED: Mar. 16, 2016

Division of Oil, Gas and Mining
Operator Change/Name Change Worksheet-for State use only

Effective Date: 11/1/2016

| FORMER OPERATOR: | NEW OPERATOR: |
|---|---|
| Bill Barrett Corporation<br>1099 18th Street, Suite 2300<br>Denver, CO 80202 | Rig II, LLC<br>1582 West 2600 South<br>Woods Cross, UT 84087 |
| CA Number(s): | Unit(s): |

**WELL INFORMATION:**

| Well Name | Sec | TWN | RNG | API | Entity | Mineral | Surface | Type | Status |
|---|---|---|---|---|---|---|---|---|---|
| See Attached List | | | | | | | | | |

**OPERATOR CHANGES DOCUMENTATION:**

1. Sundry or legal documentation was received from the **FORMER** operator on: 10/21/2016
2. Sundry or legal documentation was received from the **NEW** operator on: 10/21/2016
3. New operator Division of Corporations Business Number: 8256968-0160

**REVIEW:**

1. Surface Agreement Sundry from **NEW** operator on Fee Surface wells received on: N/A
2. Receipt of Acceptance of Drilling Procedures for APD on: 10/21/2016
3. Reports current for Production/Disposition & Sundries: 11/2/2016
4. OPS/SI/TA well(s) reviewed for full cost bonding: 11/3/2016
5. UIC5 on all disposal/injection/storage well(s) approved on: 11/3/2016
6. Surface Facility(s) included in operator change: None
7. Inspections of PA state/fee well sites complete on (only upon operators request): 11/3/2016

**NEW OPERATOR BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: UTB000712
2. Indian well(s) covered by Bond Number: LPM 922467
3. State/fee well(s) covered by Bond Number(s): 9219529

**DATA ENTRY:**

1. Well(s) update in the **OGIS** on: 11/7/2016
2. Entity Number(s) updated in **OGIS** on: 11/7/2016
3. Unit(s) operator number update in **OGIS** on: N/A
4. Surface Facilities update in **OGIS** on: N/A
5. State/Fee well(s) attached to bond(s) in **RBDMS** on: 11/7/2016
6. Surface Facilities update in **RBDMS** on: N/A

**COMMENTS:**

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

| Well Name | Sec | TWN | RNG | API Number | Entity | Mineral | Surface | Type | Status |
|---|---|---|---|---|---|---|---|---|---|
| SWD 9-36 BTR | 9 | 030S | 060W | 4301350646 | 18077 | Indian | Fee | WD | A |
| 16-6D-46 BTR SWD | 6 | 040S | 060W | 4301350781 | 18327 | Indian | Fee | WD | A |
| 6-32-36 BTR SWD | 32 | 030S | 060W | 4301350921 | 18329 | Indian | Fee | WD | A |
| LC TRIBAL 8-26D-47 | 26 | 040S | 070W | 4301334024 | | Indian | Indian | OW | APD |
| 16-21D-37 BTR | 21 | 030S | 070W | 4301350758 | | Indian | Fee | OW | APD |
| 14-11D-37 BTR | 11 | 030S | 070W | 4301350862 | | Indian | Fee | OW | APD |
| 7-17D-46 BTR | 17 | 040S | 060W | 4301350883 | | Indian | Indian | OW | APD |
| 14-12D-37 BTR | 12 | 030S | 070W | 4301350894 | | Indian | Fee | OW | APD |
| 1-18D-36 BTR | 18 | 030S | 060W | 4301350922 | | Indian | Fee | OW | APD |
| 13-2D-45 BTR | 2 | 040S | 050W | 4301350931 | | Indian | Indian | OW | APD |
| 5H-16-46 BTR | 16 | 040S | 060W | 4301350992 | | Indian | Indian | OW | APD |
| 9H-17-45 BTR | 17 | 040S | 050W | 4301351098 | | Indian | Indian | OW | APD |
| 13H-8-46 BTR UB | 8 | 040S | 060W | 4301351124 | | Indian | Indian | OW | APD |
| 8H-9-46 BTR | 9 | 040S | 060W | 4301351140 | | Indian | Indian | OW | APD |
| LC TRIBAL 7-31D-37 | 31 | 030S | 070W | 4301351147 | | Indian | Fee | OW | APD |
| 14-16D-45 BTR | 16 | 040S | 050W | 4301351178 | | Indian | Indian | OW | APD |
| 16-19D-37 BTR | 19 | 030S | 070W | 4301351179 | | Indian | Fee | OW | APD |
| 6-2D-45 BTR | 2 | 040S | 050W | 4301351234 | | Indian | Indian | OW | APD |
| 2-2D-45 BTR | 2 | 040S | 050W | 4301351235 | | Indian | Indian | OW | APD |
| 10-26-35 BTR | 26 | 030S | 050W | 4301351248 | | Indian | Fee | OW | APD |
| LC TRIBAL 1H-33-46 | 33 | 040S | 060W | 4301351257 | | Indian | Fee | OW | APD |
| LC TRIBAL 9-25D-46 | 25 | 040S | 060W | 4301351276 | | Indian | Indian | OW | APD |
| LC TRIBAL 8H-30-45 | 30 | 040S | 050W | 4301351277 | | Indian | Indian | OW | APD |
| LC TRIBAL 16H-30-45 | 30 | 040S | 050W | 4301351279 | | Indian | Indian | OW | APD |
| LC TRIBAL 13-30D-45 | 30 | 040S | 050W | 4301351282 | | Indian | Indian | OW | APD |
| LC TRIBAL 16H-36-46 | 36 | 040S | 060W | 4301351291 | | Indian | Indian | OW | APD |
| LC TRIBAL 13H-30-46 | 30 | 040S | 060W | 4301351321 | | Indian | Indian | OW | APD |
| LC TRIBAL 13H-31-46 | 31 | 040S | 060W | 4301351326 | | Indian | Indian | OW | APD |
| LC TRIBAL 16-31D-46 | 31 | 040S | 060W | 4301351328 | | Indian | Indian | OW | APD |
| LC TRIBAL 5H-26-47 | 26 | 040S | 070W | 4301351337 | | Indian | Indian | OW | APD |
| LC TRIBAL 5H-19-45 | 20 | 040S | 050W | 4301351349 | | Indian | Indian | OW | APD |
| LC TRIBAL 16-36D-47 | 36 | 040S | 070W | 4301351363 | | Indian | Indian | OW | APD |
| 15-4D-47 BTR | 4 | 040S | 070W | 4301351377 | | Indian | Fee | OW | APD |
| 16-23D-46 LC TRIBAL | 23 | 040S | 060W | 4301351396 | | Indian | Fee | OW | APD |
| 15-2D-36 BTR | 2 | 030S | 060W | 4301351419 | | Indian | Fee | OW | APD |
| 16-23D-37 BTR | 23 | 030S | 070W | 4301351420 | | Indian | Fee | OW | APD |
| 11-9D-47 BTR | 9 | 040S | 070W | 4301351422 | | Indian | Fee | OW | APD |
| 15-13D-47 BTR | 13 | 040S | 070W | 4301351424 | | Indian | Indian | OW | APD |
| LC TRIBAL 15-19D-46 | 19 | 040S | 060W | 4301351426 | | Indian | Indian | OW | APD |
| 16-13D-45 BTR | 13 | 040S | 050W | 4301351428 | | Indian | Indian | OW | APD |

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|---|---|---|---|---|---|---|---|---|---|
| 14-12D-45 BTR | 12 | 040S | 050W | 4301351444 | | Indian | Indian | OW | APD |
| 16-14D-45 BTR | 14 | 040S | 050W | 4301351445 | | Indian | Indian | OW | APD |
| 5-13D-45 BTR | 13 | 040S | 050W | 4301351446 | | Indian | Indian | OW | APD |
| LC TRIBAL 16-26D-46 | 26 | 040S | 060W | 4301351450 | | Indian | State | OW | APD |
| LC TRIBAL 16-34D-46 | 34 | 040S | 060W | 4301351451 | | Indian | State | OW | APD |
| 16-12D-45 BTR | 12 | 040S | 050W | 4301351452 | | Indian | Indian | OW | APD |
| 8-12D-45 BTR | 12 | 040S | 050W | 4301351453 | | Indian | Indian | OW | APD |
| LC TRIBAL 1-35D-46 | 35 | 040S | 060W | 4301351454 | | Indian | Fee | OW | APD |
| 16-25D-37 BTR | 25 | 030S | 070W | 4301351455 | | Indian | Fee | OW | APD |
| LC TRIBAL 13H-29-46 | 28 | 040S | 060W | 4301351462 | | Indian | Fee | OW | APD |
| LC TRIBAL 14-30D-37 | 30 | 030S | 070W | 4301351494 | | Indian | Fee | OW | APD |
| 7-13D-45 BTR | 13 | 040S | 050W | 4301351497 | | Indian | Indian | OW | APD |
| LC TRIBAL 4H-35-46 | 35 | 040S | 060W | 4301351515 | | Indian | Fee | OW | APD |
| LC TRIBAL 13H-19-46 | 19 | 040S | 060W | 4301351543 | | Indian | Indian | OW | APD |
| 16-26D-37 BTR | 26 | 030S | 070W | 4301351598 | | Indian | Fee | OW | APD |
| LC TRIBAL 16-31D-37 | 31 | 030S | 070W | 4301351610 | | Indian | Fee | OW | APD |
| 5-4-35 BTR | 4 | 030S | 050W | 4301351613 | | Indian | Fee | OW | APD |
| LC TRIBAL 16-31D-47 | 31 | 040S | 070W | 4301351616 | | Indian | Indian | OW | APD |
| LC TRIBAL 13H-31-47 | 31 | 040S | 070W | 4301351617 | | Indian | Indian | OW | APD |
| LC TRIBAL 13-32D-47 | 32 | 040S | 070W | 4301351619 | | Indian | Indian | OW | APD |
| LC TRIBAL 16H-32-47 | 32 | 040S | 070W | 4301351620 | | Indian | Indian | OW | APD |
| LC TRIBAL 1-32D-47 | 32 | 040S | 070W | 4301351624 | | Indian | Indian | OW | APD |
| LC TRIBAL 4H-32-47 | 32 | 040S | 070W | 4301351625 | | Indian | Indian | OW | APD |
| LC TRIBAL 13-28D-47 | 28 | 040S | 070W | 4301351627 | | Indian | Indian | OW | APD |
| LC TRIBAL 13H-29-47 | 28 | 040S | 070W | 4301351628 | | Indian | Indian | OW | APD |
| LC TRIBAL 16H-28-47 | 28 | 040S | 070W | 4301351629 | | Indian | Indian | OW | APD |
| LC TRIBAL 1-28D-47 | 28 | 040S | 070W | 4301351639 | | Indian | Indian | OW | APD |
| LC TRIBAL 1H-27-47 | 28 | 040S | 070W | 4301351640 | | Indian | Indian | OW | APD |
| LC TRIBAL 4H-28-47 | 28 | 040S | 070W | 4301351641 | | Indian | Indian | OW | APD |
| LC TRIBAL 7-25D-58 | 25 | 050S | 080W | 4301351643 | | Indian | Indian | OW | APD |
| LC TRIBAL 6-25D-58 | 25 | 050S | 080W | 4301351644 | | Indian | Indian | OW | APD |
| LC TRIBAL 13H-24-58 | 24 | 050S | 080W | 4301351645 | | Indian | Indian | OW | APD |
| LC TRIBAL 16-24D-58 | 24 | 050S | 080W | 4301351646 | | Indian | Indian | OW | APD |
| LC Tribal 8-23D-46 | 23 | 040S | 060W | 4301351654 | | Indian | Fee | OW | APD |
| LC Tribal 16-35D-45 | 35 | 040S | 050W | 4301351656 | | Indian | Fee | OW | APD |
| LC Tribal 13H-35-45 | 35 | 040S | 050W | 4301351657 | | Indian | Fee | OW | APD |
| LC Tribal 16-36D-45 | 36 | 040S | 050W | 4301351658 | | Indian | Fee | OW | APD |
| LC Tribal 13H-36-45 | 36 | 040S | 050W | 4301351659 | | Indian | Fee | OW | APD |
| LC Tribal 5-36D-45 | 36 | 040S | 050W | 4301351661 | | Indian | Fee | OW | APD |
| LC Tribal 8-26D-46 | 26 | 040S | 060W | 4301351663 | | Indian | Fee | OW | APD |
| 3-29D-36 BTR | 29 | 030S | 060W | 4301351665 | | Indian | Fee | OW | APD |

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|---|---|---|---|---|---|---|---|---|---|
| LC Tribal 5-35D-45 | 35 | 040S | 050W | 4301351666 | | Indian | Fee | OW | APD |
| LC Tribal 5-24D-46 | 24 | 040S | 060W | 4301351668 | | Indian | Indian | OW | APD |
| LC TRIBAL 6-12D-58 | 12 | 050S | 080W | 4301351696 | | Indian | Indian | OW | APD |
| LC TRIBAL 8-12D-58 | 12 | 050S | 080W | 4301351697 | | Indian | Indian | OW | APD |
| LC TRIBAL 16H-22-47 | 21 | 040S | 070W | 4301351700 | | Indian | Indian | OW | APD |
| 5-25D-37 BTR | 25 | 030S | 070W | 4301351803 | | Indian | Fee | OW | APD |
| 8-3D-36 BTR | 3 | 030S | 060W | 4301351804 | | Indian | Fee | OW | APD |
| 14-26D-37 BTR | 26 | 030S | 070W | 4301351805 | | Indian | Fee | OW | APD |
| 9-4-35 BTR | 4 | 030S | 050W | 4301351806 | | Indian | Fee | OW | APD |
| 11-4D-35 BTR | 4 | 030S | 050W | 4301351807 | | Indian | Fee | OW | APD |
| 16-27D-37 BTR | 27 | 030S | 070W | 4301351808 | | Indian | Fee | OW | APD |
| 14-27D-37 BTR | 27 | 030S | 070W | 4301351809 | | Indian | Fee | OW | APD |
| 14-16D-46 BTR | 16 | 040S | 060W | 4301351812 | | Indian | Indian | OW | APD |
| LC Tribal 16-35D-48 | 35 | 040S | 080W | 4301351847 | | Indian | Indian | OW | APD |
| LC Tribal 13H-35-48 | 35 | 040S | 080W | 4301351848 | | Indian | Indian | OW | APD |
| LC Tribal 13-2D-58 | 11 | 050S | 080W | 4301351850 | | Indian | Indian | OW | APD |
| 5-13D-36 BTR | 13 | 030S | 060W | 4301351862 | | Indian | Fee | OW | APD |
| 5-8D-36 BTR | 8 | 030S | 060W | 4301351871 | | Indian | Fee | OW | APD |
| 16-1D-36 BTR | 1 | 030S | 060W | 4301351872 | | Indian | Fee | OW | APD |
| 8-18D-46 BTR | 18 | 040S | 060W | 4301351897 | | Indian | Fee | OW | APD |
| LC Tribal 5-36D-46 | 36 | 040S | 060W | 4301351905 | | Indian | Indian | OW | APD |
| LC Tribal 5-26D-45 | 26 | 040S | 050W | 4301351907 | | Indian | Indian | OW | APD |
| 14-13D-45 BTR | 13 | 040S | 050W | 4301351974 | | Indian | Indian | OW | APD |
| 14-34D-46 DLB | 34 | 040S | 060W | 4301351975 | | Indian | Fee | OW | APD |
| LC Tribal 5-21D-45 | 21 | 040S | 050W | 4301352001 | | Indian | Indian | OW | APD |
| LC Tribal 8-22D-45 | 22 | 040S | 050W | 4301352002 | | Indian | Indian | OW | APD |
| LC Tribal 8-25D-45 | 25 | 040S | 050W | 4301352007 | | Indian | Indian | OW | APD |
| LC Tribal 16-25D-45 | 25 | 040S | 050W | 4301352008 | | Indian | Indian | OW | APD |
| LC Tribal 16-22D-45 | 22 | 040S | 050W | 4301352009 | | Indian | Indian | OW | APD |
| LC Tribal 16-26D-45 | 26 | 040S | 050W | 4301352010 | | Indian | Indian | OW | APD |
| LC Tribal 14-31D-37 | 31 | 030S | 070W | 4301352016 | | Indian | Fee | OW | APD |
| 5-12D-45 BTR | 12 | 040S | 050W | 4301352030 | | Indian | Indian | OW | APD |
| LC Tribal 9-20D-45 | 20 | 040S | 050W | 4301352031 | | Indian | Indian | OW | APD |
| LC Tribal 13-35D-47 | 35 | 040S | 070W | 4301352055 | | Indian | Indian | OW | APD |
| LC Tribal 1-23D-47 | 23 | 040S | 070W | 4301352057 | | Indian | Indian | OW | APD |
| 9-17D-46 BTR | 17 | 040S | 060W | 4301352059 | | Indian | Indian | OW | APD |
| 11-18D-46 BTR | 18 | 040S | 060W | 4301352060 | | Indian | Indian | OW | APD |
| 9-10D-47 BTR | 10 | 040S | 070W | 4301352092 | | Indian | Fee | OW | APD |
| LC Tribal 1-17D-47 | 17 | 040S | 070W | 4301352096 | | Indian | Fee | OW | APD |
| 7-35D-37 BTR | 35 | 030S | 070W | 4301352115 | | Indian | Fee | OW | APD |
| 14-25D-37 BTR | 25 | 030S | 070W | 4301352116 | | Indian | Fee | OW | APD |

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|---|---|---|---|---|---|---|---|---|
| LC Tribal 5-25-46 | 25 | 040S | 060W | 4301352126 | Indian | Indian | OW | APD |
| 8-33D-35 BTR | 33 | 030S | 050W | 4301352161 | Indian | Fee | OW | APD |
| 5-4D-36 BTR | 4 | 030S | 060W | 4301352175 | Indian | Fee | OW | APD |
| 7-4D-36 BTR | 4 | 030S | 060W | 4301352176 | Indian | Fee | OW | APD |
| LC Tribal 4-36D-47 | 36 | 040S | 070W | 4301352186 | Indian | Indian | OW | APD |
| LC Tribal 4-22D-46 | 22 | 040S | 060W | 4301352944 | Indian | Indian | OW | APD |
| LC Tribal 16-22D-46 | 22 | 040S | 060W | 4301352945 | Indian | Indian | OW | APD |
| LC Tribal 11-19D-46 | 19 | 040S | 060W | 4301352946 | Indian | Indian | OW | APD |
| LC Tribal 7-20D-45 | 20 | 040S | 050W | 4301352947 | Indian | Indian | OW | APD |
| 15-11D-35 BTR | 11 | 030S | 050W | 4301353056 | Indian | Fee | OW | APD |
| 13-11D-35 BTR | 11 | 030S | 050W | 4301353057 | Indian | Fee | OW | APD |
| BTR 16-36D-37 | 36 | 030S | 070W | 4301353059 | Indian | Fee | OW | APD |
| 4-29D-35 BTR | 30 | 030S | 050W | 4301353060 | Indian | Fee | OW | APD |
| 1-30D-35 BTR | 30 | 030S | 050W | 4301353061 | Fee | Fee | OW | APD |
| LC TRIBAL 3-23D-46 | 23 | 040S | 060W | 4301353066 | Indian | State | OW | APD |
| LC Tribal 14-23D-46 | 23 | 040S | 060W | 4301353067 | Indian | State | OW | APD |
| LC Tribal 13-25D-46 | 25 | 040S | 060W | 4301353068 | Indian | Indian | OW | APD |
| LC Tribal 14-26D-46 | 26 | 040S | 060W | 4301353069 | Indian | State | OW | APD |
| LC Tribal 5-26D-46 | 26 | 040S | 060W | 4301353070 | Indian | State | OW | APD |
| LC Tribal 11-35D-45 | 35 | 040S | 050W | 4301353071 | Indian | State | OW | APD |
| LC Tribal 7-35D-45 | 35 | 040S | 050W | 4301353072 | Indian | State | OW | APD |
| LC Tribal 3-35D-45 | 35 | 040S | 050W | 4301353075 | Indian | State | OW | APD |
| LC Tribal 14-36D-45 | 36 | 040S | 050W | 4301353076 | Indian | State | OW | APD |
| LC Tribal 13-36D-45 | 36 | 040S | 050W | 4301353077 | Indian | State | OW | APD |
| LC Tribal 10-36D-45 | 36 | 040S | 050W | 4301353078 | Indian | State | OW | APD |
| LC Tribal 8-36D-45 | 36 | 040S | 050W | 4301353079 | Indian | State | OW | APD |
| LC Tribal 6-36D-45 | 36 | 040S | 050W | 4301353080 | Indian | State | OW | APD |
| LC Tribal 1-34D-46 | 34 | 040S | 060W | 4301353081 | Indian | State | OW | APD |
| LC Tribal 9-27D-46 | 27 | 040S | 060W | 4301353082 | Indian | State | OW | APD |
| LC Tribal 13-35D-45 | 35 | 040S | 050W | 4301353083 | Indian | State | OW | APD |
| LC Tribal 8-35D-45 | 35 | 040S | 050W | 4301353084 | Indian | State | OW | APD |
| LC Tribal 15-35D-45 | 35 | 040S | 050W | 4301353085 | Indian | State | OW | APD |
| LC Tribal 12-25D-45 | 25 | 040S | 050W | 4301353122 | Indian | Indian | OW | APD |
| LC Tribal 14-25D-45 | 25 | 040S | 050W | 4301353123 | Indian | Indian | OW | APD |
| LC Tribal 10-25D-45 | 25 | 040S | 050W | 4301353124 | Indian | Indian | OW | APD |
| LC Tribal 11-26-45 | 26 | 040S | 050W | 4301353125 | Indian | Indian | OW | APD |
| LC Tribal 13-26D-45 | 26 | 040S | 050W | 4301353126 | Indian | Indian | OW | APD |
| LC Tribal 7-31D-46 | 31 | 040S | 060W | 4301353127 | Indian | Indian | OW | APD |
| LC Tribal 7-19D-45 | 19 | 040S | 050W | 4301353128 | Indian | Indian | OW | APD |
| LC Tribal 5-19D-45 | 19 | 040S | 050W | 4301353130 | Indian | Indian | OW | APD |
| LC Tribal 7-25D-46 | 25 | 040S | 060W | 4301353132 | Indian | Indian | OW | APD |

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|---|---|---|---|---|---|---|---|---|---|
| LC Tribal 7-24D-46 | 24 | 040S | 060W | 4301353134 | | Indian | Indian | OW | APD |
| LC Tribal 14-31D-46 | 31 | 040S | 060W | 4301353135 | | Indian | Indian | OW | APD |
| LC Tribal 14-30D-46 | 30 | 040S | 060W | 4301353136 | | Indian | Indian | OW | APD |
| 13-4-35 BTR SWD | 4 | 030S | 050W | 4301353293 | | Fee | Fee | OW | APD |
| LC FEE 14-26D-47 | 26 | 040S | 070W | 4301353294 | | Fee | Indian | OW | APD |
| LC Fee 5-25D-47 | 25 | 040S | 070W | 4301353295 | | Fee | Indian | OW | APD |
| 7-35-46 LC SWD | 35 | 040S | 060W | 4301353296 | | Fee | Fee | OW | APD |
| LC Fee 1H-33-47 | 32 | 040S | 070W | 4301353309 | | Fee | Indian | OW | APD |
| LC FEE 14-2D-58 | 2 | 050S | 080W | 4301353312 | | Fee | Indian | OW | APD |
| LC FEE 13H-21-47 | 21 | 040S | 070W | 4301353313 | | Fee | Indian | OW | APD |
| LC Fee 16-21D-47 | 21 | 040S | 070W | 4301353326 | | Fee | Indian | OW | APD |
| 16-7D-46 BTR | 7 | 040S | 060W | 4301353328 | | Fee | Indian | OW | APD |
| LC Fee 15-26D-47 | 26 | 040S | 070W | 4301353331 | | Fee | Indian | OW | APD |
| LC Fee 4-24D-47 | 23 | 040S | 070W | 4301353332 | | Fee | Indian | OW | APD |
| LC Fee 5-34D-47 | 34 | 040S | 070W | 4301353333 | | Fee | Indian | OW | APD |
| LC Fee 5-35D-47 | 35 | 040S | 070W | 4301353334 | | Fee | Indian | OW | APD |
| 13-34D-47 LC Fee | 34 | 040S | 070W | 4301353337 | | Fee | Indian | OW | APD |
| 14-35D-35 BTR | 35 | 030S | 050W | 4301352120 | | Fee | Fee | OW | DRL |
| 6-17D-46 BTR | 17 | 040S | 060W | 4301351078 | | Indian | Indian | OW | OPS |
| 5-34D-35 BTR | 34 | 030S | 050W | 4301351187 | | Indian | Fee | OW | OPS |
| 5-10D-45 BTR | 10 | 040S | 050W | 4301351221 | | Indian | Indian | OW | OPS |
| 5-3D-45 BTR | 3 | 040S | 050W | 4301351810 | | Indian | Indian | OW | OPS |
| 9-34D-35 BTR | 34 | 030S | 050W | 4301352117 | | Fee | Fee | OW | OPS |
| 5-35D-35 BTR | 35 | 030S | 050W | 4301352118 | | Fee | Fee | OW | OPS |
| 1-2D-46 BTR | 2 | 040S | 060W | 4301353086 | | Indian | Fee | OW | OPS |
| 7-21-46 DLB | 21 | 040S | 060W | 4301333567 | 16526 | Indian | Indian | OW | P |
| LC TRIBAL 1H-27-46 | 27 | 040S | 060W | 4301333568 | 18175 | Indian | Fee | GW | P |
| 7-29-46 DLB | 29 | 040S | 060W | 4301333584 | 17603 | Indian | Fee | GW | P |
| LC TRIBAL 12H-28-46 | 28 | 040S | 060W | 4301333631 | 18132 | Indian | Indian | GW | P |
| LC TRIBAL 13H-21-46 | 21 | 040S | 060W | 4301333632 | 18107 | Indian | Indian | GW | P |
| 12-36-36 BTR | 36 | 030S | 060W | 4301333638 | 16336 | Indian | Fee | GW | P |
| 5-5-46 BTR | 5 | 040S | 060W | 4301333639 | 16542 | Indian | Fee | OW | P |
| 5-23-36 BTR | 23 | 030S | 060W | 4301333642 | 16675 | Indian | Fee | GW | P |
| 14-29-36 BTR | 29 | 030S | 060W | 4301333643 | 16725 | Indian | Fee | OW | P |
| 14-30-36 BTR | 30 | 030S | 060W | 4301333644 | 16701 | Indian | Fee | GW | P |
| 7-20-46 DLB | 20 | 040S | 060W | 4301333657 | 16584 | Indian | Indian | OW | P |
| LC TRIBAL 5-21D-46 | 21 | 040S | 060W | 4301333658 | 18887 | Indian | Indian | OW | P |
| 5-20-46 DLB | 20 | 040S | 060W | 4301333659 | 18750 | Indian | Indian | GW | P |
| LC TRIBAL 13H-20-46 | 20 | 040S | 060W | 4301333678 | 17979 | Indian | Indian | GW | P |
| 14-7-46 BTR | 7 | 040S | 060W | 4301333806 | 16890 | Indian | Indian | GW | P |
| 7-8-45 BTR | 8 | 040S | 050W | 4301333820 | 16974 | Indian | Indian | OW | P |

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|---|---|---|---|---|---|---|---|---|---|
| 1-5-45 BTR | 5 | 040S | 050W | 4301333868 | 16931 | Indian | Indian | OW | P |
| 5-16-36 BTR | 16 | 030S | 060W | 4301333970 | 17195 | Indian | Fee | OW | P |
| 5-29-36 BTR | 29 | 030S | 060W | 4301333972 | 17557 | Indian | Fee | OW | P |
| 4-30-36 BTR | 30 | 030S | 060W | 4301333973 | 17249 | Indian | Fee | OW | P |
| 7-19-46 DLB | 19 | 040S | 060W | 4301334004 | 19018 | Indian | Indian | OW | P |
| 5-25-36 BTR | 25 | 030S | 060W | 4301334021 | 17126 | Fee | Fee | OW | P |
| 5-4-45 BTR | 4 | 040S | 050W | 4301334089 | 17507 | Indian | Indian | OW | P |
| 13-2-46 BTR | 2 | 040S | 060W | 4301334090 | 18618 | Indian | Indian | OW | P |
| 2-3-45 BTR | 3 | 040S | 050W | 4301334099 | 17932 | Indian | Indian | OW | P |
| 7-6-45 BTR | 6 | 040S | 050W | 4301334100 | 17653 | Indian | Indian | OW | P |
| 1-9-45 BTR | 9 | 040S | 050W | 4301334101 | 17910 | Indian | Indian | OW | P |
| 8-10-45 BTR | 10 | 040S | 050W | 4301334102 | 17530 | Indian | Indian | OW | P |
| 7-17-45 BTR | 17 | 040S | 050W | 4301334104 | 17933 | Indian | Indian | OW | P |
| 16-7-45 BTR | 7 | 040S | 050W | 4301334111 | 17665 | Indian | Indian | OW | P |
| 15-18-45 BTR | 18 | 040S | 050W | 4301334112 | 17832 | Indian | Indian | OW | P |
| 6-12-46 BTR | 12 | 040S | 060W | 4301334114 | 17964 | Indian | Indian | OW | P |
| 5-13-46 BTR | 13 | 040S | 060W | 4301334115 | 17833 | Indian | Indian | OW | P |
| 16-26-36 BTR | 26 | 030S | 060W | 4301334132 | 18028 | Indian | Fee | OW | P |
| 1-23-36 BTR | 23 | 030S | 060W | 4301334136 | 17722 | Indian | Fee | OW | P |
| 15-10-36 BTR | 10 | 030S | 060W | 4301334277 | 17419 | Indian | Fee | OW | P |
| 14-5-46 BTR | 5 | 040S | 060W | 4301350307 | 17624 | Fee | Fee | OW | P |
| 14X-22-46 DLB | 22 | 040S | 060W | 4301350351 | 17604 | Indian | Indian | OW | P |
| 16-13-36 BTR | 13 | 030S | 060W | 4301350372 | 17853 | Indian | Fee | OW | P |
| 5-33-46 DLB | 33 | 040S | 060W | 4301350397 | 17765 | Indian | Fee | OW | P |
| 5-34-46 DLB | 34 | 040S | 060W | 4301350415 | 17801 | Indian | State | GW | P |
| LC FEE 12H-32-46 | 32 | 040S | 060W | 4301350431 | 18003 | Fee | Fee | OW | P |
| 1-13D-47 BTR | 13 | 040S | 070W | 4301350445 | 18205 | Indian | Fee | OW | P |
| 16-8D-45 BTR | 8 | 040S | 050W | 4301350466 | 18799 | Indian | Indian | OW | P |
| 7-13D-46 BTR | 13 | 040S | 060W | 4301350470 | 18076 | Indian | Indian | OW | P |
| 14-8D-45 BTR | 8 | 040S | 050W | 4301350567 | 18207 | Indian | Indian | OW | P |
| 14-5D-45 BTR | 5 | 040S | 050W | 4301350568 | 18108 | Indian | Indian | OW | P |
| 16-31D-36 BTR | 31 | 030S | 060W | 4301350573 | 18004 | Indian | Fee | OW | P |
| 5-7D-46 BTR | 7 | 040S | 060W | 4301350574 | 18176 | Indian | Indian | OW | P |
| LC TRIBAL 13H-33-46 | 34 | 040S | 060W | 4301350575 | 18223 | Indian | State | OW | P |
| 5-8-45 BTR | 8 | 040S | 050W | 4301350607 | 18279 | Indian | Indian | OW | P |
| 16-6D-45 BTR | 6 | 040S | 050W | 4301350610 | 18177 | Indian | Indian | OW | P |
| 5-18D-45 BTR | 18 | 040S | 050W | 4301350611 | 18300 | Indian | Indian | OW | P |
| 7-26-37 BTR | 26 | 030S | 070W | 4301350641 | 18131 | Indian | Fee | OW | P |
| 3-11D-36 BTR | 11 | 030S | 060W | 4301350642 | 18299 | Indian | Fee | OW | P |
| 16-1D-46 BTR | 1 | 040S | 060W | 4301350675 | 18525 | Indian | Indian | OW | P |
| 14-3-45 BTR | 3 | 040S | 050W | 4301350676 | 18363 | Indian | Indian | OW | P |

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4-17D-45 BTR | 17 | 040S | 050W | 4301350687 | 18517 | Indian | Indian | OW | P |
| 5-6D-45 BTR | 6 | 040S | 050W | 4301350688 | 18726 | Indian | Indian | OW | P |
| 7-7D-45 BTR | 7 | 040S | 050W | 4301350689 | 18380 | Indian | Indian | OW | P |
| 14-10D-45 BTR | 10 | 040S | 050W | 4301350754 | 18447 | Indian | Indian | OW | P |
| 14-9D-45 BTR | 9 | 040S | 050W | 4301350755 | 18379 | Indian | Indian | OW | P |
| 13-16D-36 BTR | 16 | 030S | 060W | 4301350757 | 18206 | Indian | State | OW | P |
| 5-9D-36 BTR | 9 | 030S | 060W | 4301350843 | 18381 | Indian | Fee | OW | P |
| 16-5D-46 BTR | 5 | 040S | 060W | 4301350844 | 18280 | Fee | Fee | OW | P |
| 5-27D-37 BTR | 27 | 030S | 070W | 4301350847 | 18526 | Indian | Fee | OW | P |
| 7-4D-45 BTR | 4 | 040S | 050W | 4301350884 | 18562 | Indian | Indian | OW | P |
| 2-16D-45 BTR | 16 | 040S | 050W | 4301350899 | 18619 | Indian | Indian | OW | P |
| 16-10D-45 BTR | 10 | 040S | 050W | 4301350902 | 18725 | Indian | Indian | OW | P |
| 5-2D-36 BTR | 2 | 030S | 060W | 4301350913 | 18886 | Indian | Fee | OW | P |
| 13H-27-36 BTR | 27 | 030S | 060W | 4301350918 | 18445 | Indian | State | OW | P |
| 8-16D-46 BTR | 16 | 040S | 060W | 4301350953 | 19027 | Indian | Indian | OW | P |
| 16-16D-46 BTR | 16 | 040S | 060W | 4301350956 | 19028 | Indian | Indian | OW | P |
| 16-9D-45 BTR | 9 | 040S | 050W | 4301350962 | 18662 | Indian | Indian | OW | P |
| 14-31D-36 BTR | 31 | 030S | 060W | 4301350973 | 18524 | Indian | Fee | OW | P |
| 5-10D-36 BTR | 10 | 030S | 060W | 4301350978 | 18989 | Indian | Fee | OW | P |
| 1-32D-36 BTR | 32 | 030S | 060W | 4301350979 | 18648 | Indian | Fee | OW | P |
| 16-12D-36 BTR | 12 | 030S | 060W | 4301350980 | 18748 | Indian | Fee | OW | P |
| 2-18D-45 BTR | 18 | 040S | 050W | 4301350991 | 18776 | Indian | Indian | OW | P |
| 3-1-46 BTR | 1 | 040S | 060W | 4301351017 | 18777 | Indian | Fee | OW | P |
| 10-5-45 BTR | 5 | 040S | 050W | 4301351062 | 18724 | Indian | Indian | OW | P |
| 12-4D-45 BTR | 4 | 040S | 050W | 4301351063 | 18813 | Indian | Indian | OW | P |
| 1-10D-45 BTR | 10 | 040S | 050W | 4301351064 | 18966 | Indian | Indian | OW | P |
| 16-2D-46 BTR | 2 | 040S | 060W | 4301351079 | 18830 | Indian | Indian | OW | P |
| 9H-4-45 BTR | 4 | 040S | 050W | 4301351092 | 18814 | Indian | Indian | OW | P |
| 12-17-45 BTR | 17 | 040S | 050W | 4301351097 | 18984 | Indian | Indian | OW | P |
| 5-9D-46 BTR | 9 | 040S | 060W | 4301351109 | 19313 | Indian | Fee | OW | P |
| 14-9D-36 BTR | 9 | 030S | 060W | 4301351144 | 19004 | Indian | Fee | OW | P |
| 5-31D-36 BTR | 31 | 030S | 060W | 4301351146 | 18691 | Indian | Fee | OW | P |
| 4-9D-45 BTR | 9 | 040S | 050W | 4301351157 | 18883 | Indian | Indian | OW | P |
| 8-12D-46 BTR | 12 | 040S | 060W | 4301351159 | 18911 | Indian | Indian | OW | P |
| LC TRIBAL 16-23D-47 | 23 | 040S | 070W | 4301351180 | 18617 | Indian | Indian | OW | P |
| 14-7D-45 BTR | 7 | 040S | 050W | 4301351222 | 18949 | Indian | Indian | OW | P |
| 5-16D-45 BTR | 16 | 040S | 050W | 4301351223 | 18987 | Indian | Indian | OW | P |
| 4-5D-45 BTR | 5 | 040S | 050W | 4301351242 | 18882 | Indian | Indian | OW | P |
| LC TRIBAL 16H-19-45 | 19 | 040S | 050W | 4301351278 | 18627 | Indian | Indian | OW | P |
| LC TRIBAL 13-19D-45 | 19 | 040S | 050W | 4301351280 | 18628 | Indian | Indian | OW | P |
| LC TRIBAL 5-30D-45 | 30 | 040S | 050W | 4301351281 | 19448 | Indian | Indian | OW | P |

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| LC TRIBAL 15-24D-46 | 24 | 040S | 060W | 4301351283 | 18626 | Indian | Indian | OW | P |
| LC TRIBAL 13H-24-46 | 19 | 040S | 050W | 4301351289 | 18629 | Indian | Indian | OW | P |
| 7-16-47 BTR | 16 | 040S | 070W | 4301351296 | 18950 | Indian | Fee | OW | P |
| 14-18D-45 BTR | 18 | 040S | 050W | 4301351313 | 19005 | Indian | Indian | OW | P |
| LC TRIBAL 16-30D-46 | 30 | 040S | 060W | 4301351320 | 19006 | Indian | Indian | OW | P |
| LC TRIBAL 5-20D-45 | 20 | 040S | 050W | 4301351331 | 19449 | Indian | Indian | OW | P |
| 11-8D-46 BTR | 8 | 040S | 060W | 4301351336 | 19314 | Indian | Indian | OW | P |
| 5-7D-45 BTR | 7 | 040S | 050W | 4301351350 | 18951 | Indian | Indian | OW | P |
| 7-5-35 BTR | 5 | 030S | 050W | 4301351599 | 19078 | Indian | Fee | OW | P |
| 13-5D-35 BTR | 5 | 030S | 050W | 4301351600 | 18996 | Indian | Fee | OW | P |
| 11-5D-35 BTR | 5 | 030S | 050W | 4301351601 | 19061 | Fee | Fee | OW | P |
| 15-5D-35 BTR | 5 | 030S | 050W | 4301351602 | 19062 | Fee | Fee | OW | P |
| 9-5D-35 BTR | 5 | 030S | 050W | 4301351609 | 19029 | Indian | Fee | OW | P |
| 3-5D-35 BTR | 5 | 030S | 050W | 4301351638 | 19079 | Indian | Fee | OW | P |
| 7-8-46 BTR | 8 | 040S | 060W | 4301351702 | 19315 | Indian | Indian | OW | P |
| 7-30-46 DLB | 30 | 040S | 060W | 4301351703 | 18997 | Fee | Indian | OW | P |
| 3-13D-46 BTR | 13 | 040S | 060W | 4301351718 | 18881 | Indian | Indian | OW | P |
| 2-13D-46 BTR | 13 | 040S | 060W | 4301351719 | 18885 | Indian | Indian | OW | P |
| 12-12D-46 BTR | 12 | 040S | 060W | 4301351720 | 18867 | Indian | Indian | OW | P |
| 10-12D-46 BTR | 12 | 040S | 060W | 4301351721 | 18856 | Indian | Indian | OW | P |
| 11-11D-47 BTR | 11 | 040S | 070W | 4301352091 | 19633 | Fee | Fee | OW | P |
| 7-12D-47 BTR | 12 | 040S | 070W | 4301352094 | 19600 | Indian | Fee | OW | P |
| 5-12D-47 BTR | 12 | 040S | 070W | 4301352095 | 19634 | Indian | Fee | OW | P |
| 14-33D-35 BTR | 33 | 030S | 050W | 4301352162 | 19450 | Indian | Fee | OW | P |
| 16-33D-35 BTR | 33 | 030S | 050W | 4301352163 | 19451 | Indian | Fee | OW | P |
| 14-22-46 DLB | 22 | 040S | 060W | 4301333660 | 17604 | Indian | Indian | D | PA |
| 13H-31-36 BTR | 31 | 030S | 060W | 4301350465 | 18485 | Indian | Fee | OW | PA |
| 16X-23D-36 BTR | 23 | 030S | 060W | 4301350623 | 18007 | Indian | State | OW | PA |
| 8-6-45 BTR | 6 | 040S | 050W | 4301350900 | 18561 | Indian | Indian | OW | PA |
| 13-13-36 BTR | 13 | 030S | 060W | 4301350919 | 18364 | Indian | Fee | OW | PA |
| 7-28-46 DLB | 28 | 040S | 060W | 4301333569 | 16460 | Indian | Indian | OW | S |
| 5-21-36 BTR | 21 | 030S | 060W | 4301333641 | 16674 | Indian | Fee | GW | S |
| 13-26-36 BTR | 26 | 030S | 060W | 4301333980 | 17569 | Indian | Fee | OW | S |
| 14-1-46 BTR | 1 | 040S | 060W | 4301334113 | 18516 | Indian | Indian | OW | S |
| 16-21-36 BTR | 21 | 030S | 060W | 4301334130 | 17721 | Indian | Fee | OW | S |
| 14-21-36 BTR | 21 | 030S | 060W | 4301334131 | 18006 | Indian | Fee | OW | S |
| 7-16-36 BTR | 16 | 030S | 060W | 4301334133 | 17834 | Indian | Fee | OW | S |
| 1-30-36 BTR | 30 | 030S | 060W | 4301334134 | 17905 | Indian | Fee | OW | S |
| 16-30-36 BTR | 30 | 030S | 060W | 4301334135 | 18005 | Indian | Fee | OW | S |
| 3-23-36 BTR | 23 | 030S | 060W | 4301334137 | 17860 | Indian | Fee | OW | S |
| 16-16-36 BTR | 16 | 030S | 060W | 4301334138 | 17666 | Indian | Fee | OW | S |

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4-26-36 BTR | 26 | 030S | 060W | 4301334139 | 17620 | Fee | Fee | OW | S |
| 9-11-36 BTR | 11 | 030S | 060W | 4301334276 | 17451 | Indian | Fee | OW | S |
| 3-36-36 BTR | 36 | 030S | 060W | 4301350398 | 17955 | Indian | Fee | OW | S |
| 7-10-36 BTR | 10 | 030S | 060W | 4301350437 | 18052 | Indian | Fee | OW | S |
| 16-12D-46 BTR | 12 | 040S | 060W | 4301350467 | 18051 | Indian | Indian | OW | S |
| 13H-13-46 BTR | 13 | 040S | 060W | 4301350468 | 18208 | Indian | Indian | OW | S |
| 13-12-46 BTR | 12 | 040S | 060W | 4301350469 | 18233 | Indian | Indian | OW | S |
| 14-8D-36 BTR | 8 | 030S | 060W | 4301350612 | 18163 | Indian | Fee | OW | S |
| 14-7D-36 BTR | 7 | 030S | 060W | 4301350613 | 18330 | Indian | Fee | OW | S |
| 16-9-36 BTR | 9 | 030S | 060W | 4301350645 | 18078 | Indian | Fee | OW | S |
| 7-27-37 BTR | 27 | 030S | 070W | 4301350647 | 18090 | Indian | Fee | OW | S |
| 16-12D-37 BTR | 12 | 030S | 070W | 4301350785 | 18446 | Indian | Fee | OW | S |
| 14-21D-37 BTR | 21 | 030S | 070W | 4301350859 | 18548 | Indian | Fee | OW | S |
| 10-18D-36 BTR | 18 | 030S | 060W | 4301350915 | 18884 | Indian | Fee | OW | S |
| 5-27D-36 | 27 | 030S | 060W | 4301350917 | 18482 | Indian | State | OW | S |
| 10-36D-36 BTR | 36 | 030S | 060W | 4301351005 | 18523 | Indian | Fee | OW | S |
| 14-6D-45 BTR | 6 | 040S | 050W | 4301351158 | 18967 | Indian | Indian | OW | S |
| 5H-1-46 BTR UTELAND BUTTE | 6 | 040S | 050W | 4301351215 | 18728 | Indian | Indian | OW | S |
| 5H-1-46 BTR WASATCH | 6 | 040S | 050W | 4301351216 | 18727 | Indian | Indian | OW | S |
| 1-25D-36 BTR | 25 | 030S | 060W | 4301351294 | 18798 | Indian | Fee | OW | S |
| 5-5D-35 BTR | 5 | 030S | 050W | 4301351605 | 19055 | Indian | Fee | OW | S |
| 16-23-36 BTR | 23 | 030S | 060W | 4301333971 | 17182 | Indian | Fee | OW | TA |
| LC TRIBAL 14-23D-47 | 23 | 040S | 070W | 4301334022 | 18616 | Indian | Indian | OW | TA |
| 5-32D-36 BTR | 32 | 030S | 060W | 4301350756 | 18328 | Indian | Fee | OW | TA |

**Bill Barrett Corporation**

October 20, 2016

RECEIVED
OCT 21 2016
DIV. OF OIL, GAS & MINING

Re: Bill Barrett Corporation Transfer to New Operator

Dear Ms. Medina:

Attached please find the change of operation Form 9, Form 5's and Request to Transfer APD formchanging the operator from Bill Barrett Corporation to RIG II, LLC, effective 11/1/2016. Badlands Energy – Utah, LLC will be a sub-operator.

**New Operator Contact information:**
RIG II, LLC
1582 West 2600 South
Woods Cross, Utah 84087-0298
Telephone:(801) 683-4245
Fax:(801) 298-9889

Upon reviewing the attached, please contact myself with any questions at 303-312-8115.

Sincerely,

Bill Barrett Corporation

Brady Riley

Brady Riley
Permit Analyst

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

# SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

| | |
|---|---|
| 5. LEASE DESIGNATION AND SERIAL NUMBER: (see attached well list) | |
| 6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A | |
| 7. UNIT or CA AGREEMENT NAME: | |
| 1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER | 8. WELL NAME and NUMBER: (see attached well list) |
| 2. NAME OF OPERATOR: RIG II, LLC N4055 | 9. API NUMBER: |
| 3. ADDRESS OF OPERATOR: 1582 West 2600 South CITY Wood Cross STATE UT ZIP 84087 / PHONE NUMBER: (801) 683-4245 | 10. FIELD AND POOL, OR WILDCAT: |
| 4. LOCATION OF WELL — FOOTAGES AT SURFACE: (see attached well list) | COUNTY: |
| QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: | STATE: UTAH |

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION | | |
|---|---|---|---|
| ☑ NOTICE OF INTENT (Submit In Duplicate) | ☐ ACIDIZE | ☐ DEEPEN | ☐ REPERFORATE CURRENT FORMATION |
| Approximate date work will start: 11/1/2016 | ☐ ALTER CASING | ☐ FRACTURE TREAT | ☐ SIDETRACK TO REPAIR WELL |
| | ☐ CASING REPAIR | ☐ NEW CONSTRUCTION | ☐ TEMPORARILY ABANDON |
| | ☐ CHANGE TO PREVIOUS PLANS | ☑ OPERATOR CHANGE | ☐ TUBING REPAIR |
| | ☐ CHANGE TUBING | ☐ PLUG AND ABANDON | ☐ VENT OR FLARE |
| ☐ SUBSEQUENT REPORT (Submit Original Form Only) | ☐ CHANGE WELL NAME | ☐ PLUG BACK | ☐ WATER DISPOSAL |
| Date of work completion: | ☐ CHANGE WELL STATUS | ☐ PRODUCTION (START/RESUME) | ☐ WATER SHUT-OFF |
| | ☐ COMMINGLE PRODUCING FORMATIONS | ☐ RECLAMATION OF WELL SITE | ☐ OTHER: |
| | ☐ CONVERT WELL TYPE | ☐ RECOMPLETE - DIFFERENT FORMATION | |

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

RIG II, LLC IS SUBMITTING THIS SUNDRY AS NOTIFICATION THAT THE WELLS LISTED ON THE ATTACHED LIST HAVE BEEN SOLD TO Rig II, LLC BY BILL BILL BARRETT CORPORATION EFFECTIVE 11/1/2016. PLEASE REFER ALL FUTURE CORRESPONDENCE TO THE ADDRESS BELOW.

RIG II, LLC
1582 West 2600 South
Woods Cross, Utah 84087-0298
801-683-4245
(STATE/FEE BOND # 9219529/ BLM BOND # UTB000712/ BIA BOND # LPM9224670)

BILL BARRETT CORPORATION N2165

Duane Zavadil NAME (PLEASE PRINT)

SIGNATURE

Senior Vice President - EH&S, Government and Regulatory Affairs

RIG II, LLC

Jesse McSwain NAME (PLEASE PRINT)

SIGNATURE

Manager

NAME (PLEASE PRINT) Jesse McSwain TITLE Manager

SIGNATURE DATE 10/20/16

(This space for State use only)

APPROVED

NOV 07 2016

DIV. OIL GAS & MINING

BY: Rachel Medina

(5/2000) (See Instructions on Reverse Side)

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

# Request to Transfer Application or Permit to Drill

(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

| | |
|---|---|
| **Well name:** | (See attached list) |
| **API number:** | |
| **Location:** | Qtr-Qtr: Section: Township: Range: |
| **Company that filed original application:** | Bill Barrett Corporation |
| **Date original permit was issued:** | |
| **Company that permit was issued to:** | Bill Barrett Corporation |

| Check one | Desired Action: |
|---|---|
| | |
| | **Transfer pending (unapproved) Application for Permit to Drill to new operator** |
| | The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application. |
| ✓ | **Transfer approved Application for Permit to Drill to new operator** |
| | The undersigned as owner with legal rights to drill on the property as permitted, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. |

| **Following is a checklist of some items related to the application, which should be verified.** | **Yes** | **No** |
|---|---|---|
| If located on private land, has the ownership changed? | ✓ | |
| If so, has the surface agreement been updated? | | ✓ |
| Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? | | ✓ |
| Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? | | ✓ |
| Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location? | | ✓ |
| Has the approved source of water for drilling changed? | | ✓ |
| Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? | | ✓ |
| Is bonding still in place, which covers this proposed well? Bond No. 9219529-UDOGM / UTB000712-BLM / LPM9224670-BIA | ✓ | |

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

Name (please print) Jesse McSwain Title Manager

Signature Jesse McSwain Date 10/20/16

Representing (company name) RIG II, LLC

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

(3/2004)

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

# TRANSFER OF AUTHORITY TO INJECT

| Well Name and Number | API Number |
|---|---|
| 6-32-36 BTR SWD | 4301350921 |
| **Location of Well** | Field or Unit Name |
| Footage : 1628 FNL 1553 FWL County : DUCHENSE | CEDAR RIM |
| QQ, Section, Township, Range: SENW 32 3S 6W State : UTAH | Lease Designation and Number 2OG0005608 |

**EFFECTIVE DATE OF TRANSFER:** 11/1/2016

**CURRENT OPERATOR**

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature:
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

**NEW OPERATOR**

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature:
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by:
Title: UIC Geologist

Approval Date: 11/3/16

Comments:

(5/2000)

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

# TRANSFER OF AUTHORITY TO INJECT

| Well Name and Number | API Number |
|---|---|
| 16-6D-46 BTR SWD | 4301350781 |
| **Location of Well** | Field or Unit Name |
| Footage : 0200 FSL 0099 FEL County : DUCHESNE | ALTAMONT |
| QQ, Section, Township, Range: SESE 6 4S 6W State : UTAH | Lease Designation and Number 2OG0005608 |

**EFFECTIVE DATE OF TRANSFER:** 11/1/2016

**CURRENT OPERATOR**

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature: [signature]
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

**NEW OPERATOR**

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature: [signature]
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by: [signature]
Title: UIC

Approval Date: 11/3/16

Comments:

(5/2000)

**STATE OF UTAH**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

UIC FORM 5

# TRANSFER OF AUTHORITY TO INJECT

| Well Name and Number | API Number |
|---|---|
| SWD 9-36 BTR | 4301350646 |
| **Location of Well** | Field or Unit Name |
| Footage : 0539 FSL 0704 FEL County : DUCHESNE | CEDAR RIM |
| QQ, Section, Township, Range: SESE 9 3S 6W State : UTAH | Lease Designation and Number 2OG0005608 |

**EFFECTIVE DATE OF TRANSFER:** 11/1/2016

**CURRENT OPERATOR**

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature: [signature]
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

**NEW OPERATOR**

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature: [signature]
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by: _____ Approval Date: _____

Title: _____

Comments: This well was approved by USEPA. EPA approval will be required.

(5/2000)